

ABSTRACT

In the Introduction, the development of theories about the prehistoric cultures of the Aegean, particularly the Mycenaean culture of the Greek mainland, is sketched. It is argued that the greatest deficiencies of all theories are that they have failed to take enough account of the culture preceding the Mycenaean, the Middle Helladic, and have too readily assumed that the mainland was a cultural unity in the Middle and Late Bronze Age. The intention of this thesis is to consider the remains from a chronological and regional point of view, in which the Middle Helladic culture, the Shaft Graves, and the evidence for Early Mycenaean development outside the Argolid will all be given separate treatment. The term 'Early Mycenaean' is defined as being the period from the adoption of Mycenaean culture to the horizon of destructions marked by Late Minoan IB pottery, equivalent to the pottery-phases Late Helladic I and IIA; the following period, to the fall of Knossos, is called 'Middle Mycenaean'.

Absolute chronology is discussed in Chapter I. In the Middle Bronze Age, the links between Crete and the Near East provide a rough framework, although their contexts are rarely closely datable; however, for many reasons the 'low' chronology proposed is not convincing, and a moderate version of the 'orthodox' chronology is proposed. In the Late Bronze Age, Crete and the mainland have independent links with Egypt of much greater chronological value, which provide a close dating for ~~the~~ early phases, although the beginning of the period cannot be

closely fixed. Radiocarbon dates have too wide a margin of error to be of any use.

The Middle Helladic culture is described in Chapter II. It most probably derived directly from the Argolid-Corinthia Early Helladic III culture, which appeared after the violent destruction of the Early Helladic II sites. This culture was certainly introduced from elsewhere; a related culture appears in central Greece, and it has connections with north Greece and Anatolia, but some of its characteristic pottery is without parallel elsewhere. The development of Grey Minyan pottery, the characteristic fine ware for much of the Middle Helladic period in the central provinces, provides a chronological framework within which provincial developments can be described. The Middle Helladic culture spread to all the Peloponnese and central Greece at a relatively early date, and a related culture is found in Thessaly, that is in contact with the southern culture at a more advanced date. A distinction may be made in terms of pottery between the central provinces, north and south of the Isthmus of Corinth, and peripheral areas such as Thessaly and the west coast of Greece; in the latter, Minyan and painted wares are rare, usually imported. Each province has some peculiarities, but these are rarely of major importance; the most interesting is the common appearance of burial-tumuli along the west coast of Greece. Middle Helladic society seems to have been loosely organised on a village-basis; there is very little evidence for a ruling class or an organised religion. Sites had usually been previously inhabited and were often of acropolis type, but relatively low mounds were also

chosen. At some sites, there was evidence for a pattern of minor settlement centring on an acropolis. Burials were nearly always made singly in separate graves; these were most often within the settlement-area, but extramural cemeteries appeared in several provinces at a late stage, when grave-goods increase in frequency and value. The burial-tumuli of the west and two isolated examples in central Greece may belong to individuals or families of importance.

Skills and technology were limited; the best products were pottery in the central area and stone arrowheads. Metallurgy was rather rudimentary, probably suffering from a shortage of raw materials, but included a native element as well as imitations of Aegean types. Apart from decoration of pottery, there was virtually nothing that could be considered art. Trade internally and with the Aegean took place throughout the period; the wide spread of Grey Minyan pottery may be attributed to traders from the mainland. Late in the period, Aegean interest in the mainland began to increase, and there was much activity along both coasts, which is probably connected with the search for an important commodity such as metal. The Middle Helladic people themselves were of much the same size as the Cretans but were shorter-lived, with a high infant-mortality rate, and may have been somewhat undernourished. They were sturdy enough to be skilful hunters, and may have been warlike. It is unlikely that the inhabitants of any province felt themselves to be completely alien from any other.

The Shaft Graves are discussed in Chapter III. It is emphasised that they are a feature virtually unique to Mycenae: the two grave-circles

contain the burials of a 'royal family' and its predecessors and contemporary retainers, beginning late in the Middle Helladic period and continuing to early Late Helladic IIA in the case of the 'royal' circle. Theories that they represent a foreign ruling class have not produced any convincing ancestors for the grave-type, and have failed to explain the choice of Mycenae as a dynastic centre by these hypothetical invaders. The only unusual features associated with these graves from the beginning are the grave-type, the superior physique of the occupants and their wealth; other 'foreign' features are secondary and usually restricted to a small group of the richest graves. It seems possible that the graves represent a native ruling group, which founded its power on its superior physique and the adoption of new weapons. With these it controlled the Argive plain, probably the whole Argolid-Corinthia, and its great wealth was founded on this control, and very probably on war and plunder and on a position of commercial advantage which forced the Aegean powers, particularly Crete, to be conciliatory. It is suggested that Mycenae may have been controlling the trade for which there was earlier evidence, and that the presence of much amber demonstrates a connection of importance with central Europe.

The rulers of Mycenae had Cretan craftsmen, particularly metal-workers, at their disposal, who developed Cretan types and styles to their taste as well as reproducing some mainland types. To the extent that these represent the taste of the rulers of Mycenae, they may be termed 'Shaft Grave art', but they do not represent a native element and in many cases left no successors. Apart from Cretan skills, the rulers

of Mycenae seem to have had no use for anything Cretan, and their style of life was barbaric and 'heroic'.

In Chapter IV, attention is turned to developments elsewhere in Greece contemporary with the Shaft Graves. These can only be clearly defined in Messenia, where there is much evidence for the rise of a class of petty princes. These were often based on a strong acropolis, sometimes fortified, and were always buried in tholos tombs. The first of these were built before the end of the Middle Helladic period, and may be connected with the local burial-tumuli, with which they are sometimes associated. The goods of these princes bear a considerable resemblance to Shaft Grave types. The source of the new wealth is not clear, but the adoption of tombs that derive from the Aegean demonstrates a strong Aegean connection, which may be explained by trade.

In Chapter V, the stages of Early Mycenaean pottery are described. The decorated Late Helladic IA style was uniform, probably created in the Argolid from diverse elements including mainland, Kytheran and Cretan types. It was widely spread in the Peloponnese and central Greece, and was exported. In Late Helladic IB, a range of larger shapes appears, and there was consolidation of the range of motifs, many of the early types being dropped. In Late Helladic IIA, a class of large fine 'palatial' vases, often decorated with plant-styles, is an analogous development to the finest Late Minoan IB in Crete, but its preferences are different, and it was probably the product of an emigré group of Cretan artists. Late Minoan IB was also imported and imitated. The Late Helladic IB style continued on small vases, but the goblet began

to replace the cup as the commonest shape. Elements were adopted from the 'palatial' style and combined with elements of the Late Helladic IB style to form the Late Helladic IIB style, the first mainland style to be largely without Cretan influence. The fine 'palatial' types show a great decline in this phase, although the smaller vases are of good quality; mass-production was still rare, but the potter's wheel was in universal use. The domestic wares of the Early Mycenaean period derived directly from late Middle Helladic wares and show virtually no Cretan influence.

In Chapter VI, the tomb-types are discussed. The tholos and chamber tomb are very characteristic of Mycenaean culture, and bear a close resemblance to one another. It is argued that both are derived from the Aegean rock-cut tomb tradition, but that whereas various forms of the chamber tomb were adopted in the Peloponnese and central Greece during Late Helladic I, the tholos tomb was developed as a princely tomb in Messenia, probably by Cretan architects, and included reminiscences of the Cretan stone-built circular tomb and native burial-tumulus. The tholos came to Mycenae at about the time of the Late Helladic I-II transition, and was further developed there. It spread also to the south-east Peloponnese and Thorikos in Attica in the Early Mycenaean period and even more widely later. Small stone-built tombs resembling tholos tombs were also found in the south-east Peloponnese, and seem to have taken the place of chamber tombs. These were all usually family-tombs, although sometimes used on only one occasion, and were probably adopted as the result of a religious change, due to the

increase of Aegean influence. It seems likely that there was a class of professional tomb-cutters and architects, who spread the knowledge of the new types and built the best tholoi. The burial-tumulus remained more popular than the chamber tomb in Messenia, and rectangular built tombs derived from Middle Helladic types remained typical at Eleusis and were also found in Phocis, Thessaly and elsewhere. These were also family-tombs. Children continued to be buried in single cists or pits during the Early Mycenaean period. Finally, Tomb Rho at Mycenae is considered; it is a built tomb with a double chamber, which has been compared to tombs at Ugarit but has rock-cut parallels at Phylakopi in Melos.

In Chapter VII, Early Mycenaean architecture and various classes of artefact are considered. The architecture is very poorly represented, but seems to continue Middle Helladic types. The weapons and metal vases do not show much development from Shaft Grave types, but are less spectacular and more limited in range. The Shaft Grave tradition in jewellery and ornaments left no permanent mark, and there seem to be no widely current types in the Early Mycenaean period, although there are signs that the relief-bead was being developed. Stone vases and sealstones became more popular, but are substantially of Cretan origin. Objects such as mirrors, combs, and sets of scales have a wide distribution.

Chapter VIII is a list of sites where settlement-material or tombs of the Early Mycenaean period have been found, with a consideration of each province.

In Chapter IX, activity overseas is discussed. Late Helladic IA pottery is widespread in the Aegean, and Late Helladic IB reached the Near East: this provides evidence of Mycenaean trading activity, perhaps mainly from the Argolid, but does not suggest that the traders were doing more than explore routes already known to Crete. The mainland probably acquired its raw materials largely from Aegean middlemen. Early Mycenaean pottery has been found in the Lipari Islands and Albania, but the presence of much amber in Early Mycenaean tombs is the best evidence for an important connection with Europe; the commodity sought may well have been metal, and possibly perishable goods were offered in return. The Middle Mycenaean period saw an expansion in all these areas.

Conclusions are drawn in Chapter X. Once the tholos tomb had been accepted as the type of princely tomb, a roughly uniform Mycenaean culture was spread through much of Greece. In the Middle Mycenaean period, this uniformity was further strengthened, and Mycenaean traditions in the arts well launched. There may at this time have been a decline in the south and west Peloponnese, and the Attic and Boeotian centres seem to have increased in importance as well as the Argolid: this may be due to the centralisation of power in Crete and the establishment of a close Mycenae-Knossos link. Through this link, the 'palace society' with its attendant skills was probably brought to Greece. The inhabitants of the mainland thus remained dependent on Crete for cultural advances; after the Shaft Graves, a desire to imitate the high level of Cretan civilisation took the place

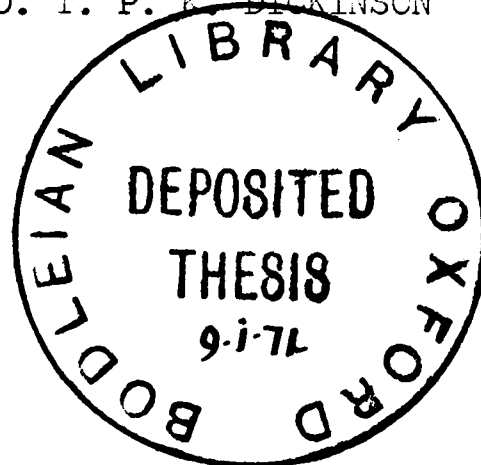
of the self-confident adaptation of what was appreciated. However, the influence of the Argolid, which remained paramount throughout the Mycenaean period, was founded on the achievement of the Shaft Grave rulers in establishing a power in Greece that could demand respect from the Aegean civilisations, and they were largely responsible for the uniformity that eventually emerged on the mainland.

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THE ORIGINS AND DEVELOPMENT OF EARLY MYCENAEAN CULTURE

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LIST OF ABBREVIATIONS(1) GENERAL

<u>Chronika</u>	Χρονικά
EB, MB, LB	Early, Middle, Late Bronze
EC, MC, LC	Early, Middle, Late Cycladic
EH, MH, LH	Early, Middle, Late Helladic
EM, MM, LM	Early, Middle, Late Minoan

Parartema

Παράρτημα

(2) PERIODICALS

(The system followed is that set out in "Abbreviations", in AJA 69 (1965), 201-6, with some additions).

<u>AA</u>	Archaeologischer Anzeiger (bound in <u>JdI</u>)
<u>AJA</u>	American Journal of Archaeology
<u>AnatSt</u>	Anatolian Studies
<u>ArchEph</u>	Ἀρχαιολογικὴ Εφημέρις
<u>ArchRep</u>	Archaeological Reports
<u>ASAtene</u>	Annuario della scuola italiana di Atene e delle missioni italiane in oriente
<u>AthAA</u>	Athens Annals of Archaeology (Ἀρχαιολογικὰ Ἀνάλεκτα ἐξ Ἀθηνῶν)
<u>AthMitt</u>	Mitteilungen des deutschen archaeologischen Instituts: athenische Abteilung
<u>BCH</u>	Bulletin de correspondance hellenique
<u>BCH Chronique</u>	"Chronique des fouilles", in <u>BCH</u>
<u>Belleten</u>	Belleten türk tarih kurumu
<u>BICS</u>	Bulletin of the Institute of Classical Studies, London
<u>BSA</u>	Annual of the British School of Archaeology at Athens

<u>Deltion</u>	Ἀρχαιολογικὸν Δελτίον
<u>Ergon</u>	τὸ Ἔργον τῆς Ἀρχαιολογικῆς Ἑταιρείας κατὰ τὸ ἔτος . . .
<u>ILN</u>	Illustrated London News
<u>JdI</u>	Jahrbuch des deutschen archaeologischen Instituts
<u>JHS</u>	Journal of Hellenic Studies
<u>JNES</u>	Journal of Near Eastern Studies
<u>JRGZM</u>	Jahrbuch des römisch-germanischen Zentralmuseums, Mainz
<u>KC</u>	Κρητικὰ Χρονικὰ
<u>OpusArch</u>	Opuscula Archaeologica
<u>OpusAth</u>	Opuscula Atheniensia
<u>Praktika</u>	Πρακτικὰ τῆς ἐν Ἀθῇναις Ἀρχαιολογικῆς Ἑταιρείας
<u>ProcPS</u>	Proceedings of the Prehistoric Society
<u>SMEA</u>	Studi micenei ed egeo-anatolici
<u>Thessalika</u>	Θεσσαλικὰ (3) <u>EXCAVATION REPORTS</u>
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Note on Conventions

- (1) In order to save space, references to articles in periodicals that are simply excavation-reports will be made thus:

S. Marinatos, in Praktika 1952, ...

- (2) Reference to plates and figures in periodicals will be made thus:

Praktika 1952, Pl., or 31, fig ...

- (3) All Roman plate-numbers and volume-numbers have been rendered as Arabic numerals; Greek numerals, except volume-numbers, have been allowed to stand.

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INTRODUCTION

The pre-Classical archaeology of Greece has only been studied in the last hundred years. The pioneer was Schliemann, who, in his determination to prove the truth of the Homeric tradition, excavated first at Troy and then in Greece. He began, naturally enough, at Mycenae, Agamemnon's capital, in 1876. His finds exceeded all expectation; they were so spectacular that, when similar remains were discovered elsewhere in Greece, it seemed natural to call them 'Mycenaean'.

In the next twenty years, the first excavations were carried out on the citadels of Mycenae, Tiryns, Athens and Gla, and a great number of stone-built 'tholos tombs' and rock-cut 'chamber tombs' were excavated all over Greece, from Thessaly to Laconia. Remains of what was taken to be the same 'Mycenaean' civilisation were found on Cephallenia, Thera, Rhodes and Crete. Much further work was done at Troy, and a different, apparently earlier civilisation was discovered in Attica and the Cyclades. The results were summarised in a brilliant synthesis,¹ that was largely the work of Tsountas, a major excavator of the period. He was able to describe the Mycenaean civilisation in detail, assign it a chronological position, and consider its predecessors and foreign connections; in the course of his study he suggested many theories that are the foundations of all subsequent discussion. He was

1. C. Tsountas and J.I. Manatt, The Mycenaean Age (1897), from which the quotation at the end of the paragraph comes.

certain that the 'Mycenaeans' were rather barbarous Greeks and that Homer preserved genuine tradition about them. Perhaps his most startlingly prophetic comment was on Crete, "which is in a fair way to contest the Mycenaean primacy with Mycenae itself".

At the time of Tsountas's summary, no Greek site had produced a series of superimposed settlements like Troy. This was remedied by the excavation of Phylakopi on Melos in the years 1896-9. Here three towns were found in an apparently uninterrupted sequence, while pottery on the bed-rock provided evidence for an even earlier settlement. Particular attention was paid to the pottery of the successive towns; material resembling Mycenaean pottery in technique and designs began to appear in the Second City. It was termed 'Early Mycenaean' in the publication,² and was believed to be one branch of the stock from which Mycenaean pottery derived. However, finds in Crete rendered this classification obsolete almost at once.

In Crete, Evans's excavations at Knossos in the years 1900-05 provided the material for a new system. Underneath a 'Mycenaean' palace, an earlier palace was found, with which completely different pottery was associated: similar pottery had been found in the Kamares cave in Crete, after which it has been named. In 1902, Evans called it 'Middle Minoan':³ this was in anticipation of a paper on the pottery of Knossos published by his assistant Mackenzie in 1903, in which the term

2. Phylakopi I, 106-7.

3. A.J. Evans, "The Palace of Knossos: Provisional Report of the Excavations for the Year 1902", in BSA 8 (1901-2), 1 and 98.

'Minoan' was consistently used and Early, Middle and Late distinguished.⁴ Mackenzie equated the later phase of Late Minoan with "the fabrics elsewhere described as Mycenaean" and claimed that Crete was "the dominant influence in the creation of the so-called 'Mycenaean' style". The 'Minoan' terminology is the rule in Evans's reports for 1904-5, and it is clear that he swiftly accepted Mackenzie's theory of an uninterrupted development of Cretan culture and drew the logical conclusion, that the 'Mycenaean' culture of the mainland was an offshoot of the Late Minoan of Crete. In an important article,⁵ he set out a tripartite scheme, which divided each phase of Minoan into three, and put the fall of Knossos at the end of the second Late Minoan phase. Observable changes in the pottery were correlated with the architectural sequence to make up this scheme, and thus a precedent was set for the linking of historical periods with the artistic phases of pottery.

The continuous sequences of Phylakopi and Knossos, and the high level of civilisation that they reached in the Middle Bronze Age, could not be matched on the mainland. It is not surprising, therefore, that the theories of Evans and Mackenzie were generally accepted. The evidence of Phylakopi showed that a different culture from that of Crete had flourished in the Cyclades before the Late Bronze Age, while the mainland was still poor and barbarous: their Late Bronze Age cultures

4. D. Mackenzie, "The Pottery of Knossos", in JHS 23 (1903), 157-205, from which the following quotations come.

5. A.J. Evans, Essai de Classification des Époques de la Civilisation minoenne (1906).

were so similar to that of Crete that conquest and colonisation or domination from Crete was proposed to account for them. The term 'Cycladic' was used for the phases of the islands' culture, but no tripartite scheme was worked out; the term 'Mycenaean' was retained to signify the local Late Minoan culture of the mainland.

While important discoveries continued to be made in Crete, the centre of the Minoan culture, interest shifted on the mainland to the pre-Mycenaean phases and particularly to the Neolithic, which was represented at numerous sites in Thessaly and central Greece. However, some important Mycenaean remains were also found, notably a palace at Thebes and tholos tombs in the west Peloponnese, an area not previously explored. At a few sites, sequences that appeared to cover the whole Bronze Age were found, especially Orchomenos.⁶ But a relatively full sequence was first discovered at Korakou, near Corinth, in 1915-16. Blegen, the excavator, collaborated with Wace in a paper that set in order for the first time the major pre-Mycenaean wares, in a system based primarily on the results of Korakou.⁷ They coined the term 'Helladic' for the mainland cultures, but made no divisions, beyond the main ones of Early, Middle and Late, the last being equivalent to Mycenaean. Their results were very suggestive: in particular, they noted a cultural break at the end of Early Helladic, but some continuity between Middle and Late Helladic. As a corollary, they postulated a

6. Orchomenos I, 19-85.

7. A.J.B. Wace and C.W. Blegen, "The Pre-Mycenaean Pottery of the Mainland", in BSA 22 (1916-18), 175-89.

considerable native element in the local Minoan culture of the Late Bronze Age, which they held to be responsible for "divergences between the Late Minoan cultures of Crete and the mainland". In their view, Minoan influence first began to be felt in the Middle Helladic period and "profoundly modified" the character of mainland culture "by the introduction of a far higher standard of civilisation". The effect of this was to suggest that the Mycenaean culture arose as a result of increasing influence from Crete, and was not the provincial product of Cretan colonists.

In the final publication of Korakou,⁸ Blegen further defined and enlarged upon these views. He divided the mainland's cultural development into eight phases, three Early, two Middle and three Late Helladic. These were equated with the nine phases of Crete: Early Helladic I was believed to have continued longer than its Cretan counterpart, thus causing an overlap which continued to Middle Helladic II, which was made contemporary with Middle Minoan III. It was shown that, while Minoan influence on the finest mainland pottery grew from a small beginning in Middle Helladic II to a peak in Late Helladic II, the coarser wares continued Middle Helladic traditions, which finally reasserted themselves in the Late Helladic III fine ware. The appearance of intramural children's burials and houses of the 'megaron' plan in both Middle and Late Helladic strata provided further evidence for continuity.

In his publication of excavations at Mycenae, Wace departed even more

8. Korakou.

radically from accepted views.⁹ He derived the Shaft Graves discovered by Schliemann from the Middle Helladic cist, traced a sequence of tholos tombs following them, and put the two best, the Treasury of Atreus and the Tomb of Clytaemnestra, at the end of the sequence. He dated the construction of these, of the palace and of the fortifications, after 1400 B.C., the accepted date of the fall of Knossos. The rulers of Mycenae, then, were of native stock, at first strongly influenced by Crete but reaching the height of their civilisation after the fall of the great Cretan centres.

As was pointed out at the time,¹⁰ the reaction to these views was of the nature of a reaction against heresy. Evans, in reply, concerned himself principally with the tombs.¹¹ He argued that Wace's sequence of tholos tombs was back to front, and that the two best were among the earliest, of Middle Minoan III or Late Minoan I date; the Shaft Graves were repositories for the dead of these tholoi, moved in time of danger to a safe place within the citadel-walls. Evans was also concerned to stress the suddenness of the change between Middle and Late Helladic, and to reiterate a view first expressed in 1912,¹² that the Greek mythical tradition had originally dealt with the Cretan overlords of

9. Mainly in BSA 25 (1921-3).

10. J.P. Droop, "Mycenae 1921-23: Legitimate and Illegitimate Criticism", in Annals of Archaeology and Anthropology 13 (1926), 43-8.

11. A.J. Evans, The Shaft-Graves and Beehive Tombs of Mycenae and their Interrelation (1927).

12. A.J. Evans, "The Minoan and Mycenaean Element in Greek Life", in JHS 32 (1912), 288.

the Aegean, and had been taken over and adapted by Greek invaders late in the Bronze Age. In a final elaboration of his views,¹³ he suggested that after the fall of Knossos, attributed to an earthquake, the capital of the Minoan empire had been moved to Mycenae, where he detected purely Knossian influence in the pottery, the frescoes and the Linear B script. The mainland was thus denied any original culture throughout the Late Bronze Age.

The issue was now complicated by the problem of whether or not the Late Bronze Age population of the mainland was Greek, and this has remained a major element in discussions of the Middle and Late Bronze Age ever since. Archaeological and philological arguments to show that they were Greek were first produced by Harland and Buck:¹⁴ finally, a major article on the subject was produced by Blegen and the philologist Haley in 1928.¹⁵ Blegen introduced a further element of the controversy by suggesting that Knossos was destroyed by mainland Greeks, who subsequently ruled Crete, a view that could be supported from Greek tradition.

Much excavation was carried out in Greece between the two World Wars, and several sites were excavated for stratigraphical sequences rather than

13. PM IV, 944-6.

14. J.P. Harland, "The Peloponnesos in the Bronze Age", in Harvard Studies in Classical Philology 34 (1923), 1-62; C.D. Buck, "The Language Situation in and about Greece in the Second Millennium B.C.", in Classical Philology 21 (1926), 1-26.

15. C.W. Blegen and J.P. Haley, "The Coming of the Greeks", in AJA 32 (1928), 141-54.

any intrinsic importance. The results at two of the most important, Asine in the Argolid and Eutresis in Boeotia, produced an individual interpretation from their excavators. Unlike Korakou, neither produced strata of Late Helladic I and II material, but merely scattered sherds: they therefore suggested that at these sites a basically Middle Helladic culture had continued to the beginning of Late Helladic III, the earlier styles being 'rich men's wares' produced in imitation of Cretan pottery by a few potters.¹⁶ They agreed with Wace and Blegen that Late Helladic III was a mainland product, thus ignoring Evans's more extreme position, but did not commit themselves clearly in the controversy otherwise. At this time the term 'Mycenaean' fell into disfavour among archaeologists concerned primarily with the mainland, for it was felt to carry the sense of 'local Minoan' and thus prejudice the issue.

The classifiers and historians at first generally followed Evans. Forsdyke and Glotz took this position before 1925, and others followed.¹⁷ But in his definitive publication of the Shaft Graves,¹⁸ Karo stressed the non-Minoan elements in the Shaft Grave complex of ideas and objects, and suggested that the objects that looked clearly Minoan had been looted from Crete. In a study of the Mycenaean world,¹⁹ Nilsson

16. Asine, 435; Eutresis, 235-6.

17. BM Cat. I 1, xxxviii-ix; G. Glotz, La Civilisation égéenne (1923); H.R. Hall, The Civilisation of Greece in the Bronze Age (1928), 140; A.R. Burn, Minoans, Philistines and Greeks (1930), 75.

18. SG.

19. M.P. Nilsson, Homer and Mycenae (1933).

listed eleven points of difference between mainlanders and Cretans. It was left to Pendlebury to suggest a compromise position in 1939:²⁰ while the Mycenaean culture of the mainland was distinct from that of Crete from the start, the native rulers of the mainland were dominated artistically and politically from Crete, with the rest of the Aegean, until the fall of Knossos. This was brought about by a revolt of mainland princes, of which the legend of Theseus and the Minotaur was believed to be a memory. At the same time, however, Wace and Blegen were adopting a more extreme position: they argued from the statistics of Aegean exports to the Levant that the mainland took a greater part in trade with the Near East than Crete from the beginning of the Late Bronze Age.²¹ This suggested that the mainlanders were free agents.

The Second World War and the Greek civil wars virtually prevented excavation on the Greek mainland until 1950, but study of the problems proceeded apace. By far the most important contribution was Furumark's monumental work on Mycenaean pottery, which also included close analysis of the Middle Helladic and the Cycladic and Minoan styles.²² By detailed assessment of the Cretan and mainland contributions to the Mycenaean style at every stage, he put the whole controversy on a different plane. In a fundamental article,²³ he worked out the historical implications of his

20. Archaeology of Crete, 225-31.

21. A.J.B. Wace and C.W. Blegen, "Pottery as Evidence for Trade and Colonisation in the Aegean Bronze Age", in Klio 32 (1939), 131-47.

22. MP and CMP.

23. Ialysos.

study for the Mycenaean period before the fall of Knossos, considering the whole question of relations between Crete, the mainland and the Near East at that time. While criticising Evans's 'pan-Minoan' views, he believed that the reaction against them had gone too far, and inclined to Pendlebury's position. In opposition to Wace and Blegen, he found the evidence for Cretan control of the Aegean persuasive. He believed that the first hundred years of the Mycenaean culture, 1550-1450 B.C., saw a process of 'minoanisation' of Middle Helladic culture, beginning in the Argolid and being spread from there, which was closely connected with the rise of 'royal' centres. In some areas, the Middle Helladic culture lingered until the beginning of Late Helladic III. In the period 1450-1400 B.C., the mainland had a distinctive culture that had been locally evolved on lines parallel to Knossian Late Minoan II but different from it, blending mainland and Minoan elements, and it was from this culture that the Late Helladic III derived.

In the same year that this study was published, Lorimer considered the Mycenaean period in detail as part of her study of the material evidence relating to Homer.²⁴ In general, she followed the line of Wace and Blegen, but made some new suggestions, that a settlement of Cretan refugees on the mainland, after earthquakes late in the Middle Minoan period, helped to produce the Mycenaean culture through mingling with the native population, and that the Shaft Grave kings were a group of alien invaders, who did not affect the rest of Greece culturally and

24. H.L. Lorimer, Homer and the Monuments (1950), 14-22.

soon became absorbed. She also revived Karo's theory that the wealth of the Shaft Graves was made up of loot from Crete.

Since 1950, an immense amount of new material has been excavated, several pre-war excavations have been published, and studies of the Greek Bronze Age or particular problems have become relatively common. Much of the new material is of the utmost importance for the early Mycenaean period: I note especially the new circle of shaft graves from Mycenae, the fine series of tombs and sites in Messenia, the Cretan colony of Kastri on Kythera, and the important site at Aghia Irini on Kea. Excavations at Lerna and Lefkandi have produced Middle Helladic strata of great depth, allowing a proper chronological analysis of the period for the first time. Finally, the decipherment of Linear B as Greek has had a great effect on general theories of the arrival of the Greeks and the nature of Bronze Age society.

But, although there is much more evidence available now, its deficiencies should not be overlooked. Excavations and surveys have favoured some parts of the mainland to a disproportionate extent; there remains hardly any architectural or stratigraphical evidence for the early Mycenaean period comparable to the palaces, villas and towns of Crete and the islands; and the greater part of the new evidence is unpublished.

As a result of the new discoveries, there is less common ground than there was ten years ago, as may be seen by comparing the major studies of Stubbings, Taylour, Vermeule, Mylonas and Hood.²⁵ But the

25. F.H.Stubbings, "The Rise of Mycenaean Civilisation", in CAH II, Ch.14; Lord William Taylour, The Mycenaeans (1964); E.T.Vermeule, Greece in the Bronze Age (1964); G.E.Mylonas, Mycenae and the Mycenaean Age (1966); M.S.F.Hood, The Home of the Heroes: the Aegean before the Greeks (1967).

disagreement centres on certain crucial points rather than on the general picture: only Hood is in complete opposition to this, since he has not accepted the decipherment of Linear B and does not believe that the mainland population was 'Greek' in the Bronze Age. Palmer has also been led by his study of Linear B to an individual interpretation of the Middle and Late Bronze Age.²⁶ With the exception of these minority views, the approach to the problems of the early Mycenaean period has not changed very much. Discussion starts from the assumption that Middle Helladic Greece was a cultural unity and that processes observable in some provinces might legitimately be concluded to be taking place in all. The Shaft Graves, therefore, could be considered to hold the key to the origins of Mycenaean culture. Other provinces might not be as rich as the Argolid but underwent a similar change, as a result either of the Argolid's influence or of the general response of a closely-knit culture to a new stimulus. The source of this stimulus has generally been agreed to be Crete, and central Crete in particular, and it is thought to have begun to be felt rather suddenly towards the end of the Middle Minoan period. Development on the mainland thereafter proceeded in an orderly fashion, possibly dominated artistically by the Argolid; but the various provinces were closely enough linked to prevent the appearance of true provincial cultures, and southern Greece remained a unity in Mycenaean times. The main points at issue have been the extent of the Cretan influence, the source of Mycenaean wealth, and the possibility

26. L.R. Palmer, Mycenaeans and Minoans (2nd revised edition, 1965).

that the Shaft Grave kings were alien invaders.

In this picture, there has been very little room for a consideration of Middle Helladic art and technology. The Cretan element in the Shaft Graves has been strongly emphasised, whether it is thought to consist mainly of Cretan work or of inspired mainland imitation and innovation. The latter view has generally been preferred, but its upholders rather take it for granted that the Middle Helladic people, as 'Greeks', were capable of such technical feats. In fact, there has been very little serious consideration of the Middle Helladic period from any standpoint; yet the foundations of the Mycenaean world must be sought there. Either the early Mycenaean people inherited artistic skills from their forebears, or they acquired wealth to pay for fine works of art, or they included a new element bringing with it skills and wealth. Only a detailed study of the Middle Helladic period can provide evidence for or against any of these theories.

Nor need the process stop with the Middle Helladic period. There is no longer any necessity for the other provinces of Greece to be considered in parenthesis to the Argolid in early Mycenaean times; in particular, Messenia has established its right to be considered a focal area of Mycenaean culture. Other assumptions, such as that of direct influence from Crete, may also be questioned, in view of the long-established Cretan colony on Kythera and the strong Cretan influence during the Middle Bronze Age on sites like Aghia Irini and Phylakopi. The new material, although it is poorly known as yet, does at least allow the possibility of a new synthesis.

I shall therefore approach the Middle Helladic and early Mycenaean period from a regional and chronological point of view. After a discussion of absolute chronology, I shall attempt to establish a Middle Helladic pottery sequence, to describe events in the different provinces of Greece in terms of it, and to give a picture of the Middle Helladic world. The two groups of shaft graves at Mycenae will be considered together in a separate chapter. I shall then describe the early development of Mycenaean pottery and give separate treatment to the other classes of evidence for the period, especially the grave-types. This will be followed by a survey of all known sites of the period, by provinces. Activity abroad will be considered under three heads, the Aegean, the Near East and Europe. Finally, I shall try to draw historical conclusions and sketch later development.

NOTE ON TERMINOLOGY

In this study, I shall use the term 'Early Mycenaean' with a precise meaning. It has not been commonly used, but has generally meant the period from the Shaft Graves to the fall of Knossos, and has been equated with the pottery-phases LH I and II. But since the fall of Knossos has been dated much lower than the end of LM II, there is scope for subdivision of the long period before. I intend to take the widespread destruction-horizon in Crete, dated by mature LM IB pottery, as a historical terminus; following the equation by Furumark of LH I-IIA with LM IA-B, all material associated with LH I-IIA material will be called 'Early Mycenaean'. The following period, to the fall of Knossos,

includes the LH IIB-III A1 phases and will be called 'Middle Mycenaean'. As far as the mainland is concerned, this division is somewhat artificial, since no break can be observed, but I believe that the two periods have a real difference in character, shown not least in the different relationship between Crete and the mainland.

The beginning of the Early Mycenaean period cannot be closely fixed. The Shaft Graves seem to have been in use for some time before the introduction of Mycenaean pottery, and therefore can no longer be used to mark the beginning of LH I. Moreover, there seems, from their evidence, to have been a short period when the earliest Mycenaean pottery and the late MH fine wares co-existed, as one might expect. Chamber tombs contained predominantly Mycenaean pottery from the start, but they may well have been introduced at different times in different areas. Moreover, the evidence does not suggest that the change from MH to Mycenaean was simultaneous in all provinces of the mainland. As I shall show in my chapter on chronology, it is possible to fix fairly closely the time during which the change was happening; but no clear line can be drawn. But I shall not consider the Mycenaean period to have begun in any province before the appearance of Mycenaean pottery in quantity.

Chapter I

THE CHRONOLOGY

Middle and Late Bronze Age chronology in the Aegean is essentially concerned with pottery. If the stylistic phases of pottery can be given dates, then buildings, tombs and destruction-levels can be dated by the associated pottery. Rather misleadingly, these phases have often been treated as chronological periods, although stylistic development cannot be necessarily tied to historical events. The traditional division of the Bronze Age in the Aegean into nine parts has now proved inadequate both historically and stylistically. In Crete, the broad division into Prepalatial, Protopalatial and Neopalatial has more historical significance than that into Early, Middle and Late Minoan, but it is completely inadequate for stylistic divisions: the developed system set out by Platon¹ is too schematic to be of much use. I shall therefore continue to use the older system for Crete, and its counterpart for the mainland, which suffers from similar disadvantages but is a closer approximation to the facts, particularly in the division between Middle and Late Helladic.

The successive phases of MH as observed at Lerna can only be dated by MM imports, and the early development of Mycenaean pottery is closely

1. N. Platon, "Chronologie de la Crète et des Cyclades à l'Age du Bronze", in Fifth International Congress of Prehistoric and Protohistoric Sciences (1961), 671-6.

dependent upon the LM: the dates of the Minoan pottery-phases are therefore our primary concern. Minoan pottery, in its turn, can only be dated absolutely through Cretan links with Egypt, since neither Crete nor the mainland had good and closely datable links with the Near East at this period. The few dates obtained by the Carbon-14 method are too odd, and have too wide a range of error, to be of any use.² After the beginning of the Mycenaean period, the mainland has valuable independent links with Egypt, which provide a check on the Minoan dating.

A considerable variety of dates has been proposed for the MM sequence in the past (see FIG.1), culminating in Åström's attempt to lower the whole chronology by a century or more.³ the table will show the extent of disagreement on the relative length and importance of the various phases. Åström's studies have shown how insecurely MM chronology is based. Apart from the Mesopotamian cylinder-seal from Platanos Tholos B, to which I shall come later, it depends on a small number of MM vases and sherds, mostly datable MM IB-II, found in Egypt, Syria and Cyprus, a few Egyptian scarabs from MM IA-IIA contexts in Crete, and two Egyptian objects in MM IIB and IIIA contexts respectively at Knossos.⁴ Åström arrives at his low chronology by casting doubt on the accepted contexts of much of this material, redating the scarabs

2. See Appendix 1.

3. P. Åström, The Middle Cypriot Bronze Age (1957), 257-73; "Remarks on Middle Minoan Chronology", in KC 15-16 (1961-2) I, 137-50; "New Evidence for Middle Minoan Chronology", in Second Cretological Congress, 120-27.

4. See Appendix 2.

stylistically, and following Albright's low chronology for the Near East. I think that he has shown successfully that the contexts of nearly all the Minoan exports were disturbed or vague; others remain unpublished, and those of the Egyptian objects at Knossos are now unverifiable. His discussion has made it clear that there is considerable scope for disagreement in the stylistic dating of scarabs; in fact, the dates obtainable seem too wide to be of much use.⁵ More serious still, but not stressed by Åström, is the point that the definition of the phases of MM pottery has still not been agreed. It seems likely, for instance, that MM IIA-B were 'palatial' styles of central Crete, co-existing with a continuation of MM IB outside the palaces and in east Crete:⁶ this may well affect the real, as opposed to stylistic, date of material in the collective tombs from which most of the Egyptian scarabs come.

All theories are affected by the evidence from the Near East, especially Egypt. This is not as certainly based as it appears to be. In Egypt, the strong Twelfth Dynasty, universally dated between c.1991 and 1786/76 B.C., was followed by a period of decline, generally known as the Second Intermediate Period, whose history is extremely obscure.⁷

5. K. Branigan, "The Mesara Tholoi and Middle Minoan Chronology", in SMEA 5 (1968), 25-8.

6. R.W. Hutchinson, Prehistoric Crete (1962), 170, 197.

7. Most recently, J. von Beckerath, Untersuchungen zur politischen Geschichte der zweiten Zwischenzeit in Aegypten (1964); cf. also W.C. Hayes, "Egypt from the Death of Ammenemes III to Segenenre II" (CAH II, Ch. 2), and A. Gardiner, Egypt of the Pharaohs (1961), Ch. 7.

Although at first the unity of Egypt seems to have been maintained, kings succeeded one another with bewildering rapidity, only occasionally having relatively long reigns. The use of the term 'Thirteenth Dynasty' for this succession of rulers is misleading, in that it suggests a stability not borne out by the evidence. Few of the kings were related to one another, and one may well suspect a situation of almost perpetual intrigue. Some of the more important rulers maintained connections with Byblos, but there is no reason to believe that such contact was in fact continuous. Later, there seems to have been a collapse into petty principalities, which allowed the infiltration and eventual domination of Asiatic rulers, known as the Hyksos kings. These established a stable dynasty, which was finally overthrown by the princes of Thebes, who inaugurated the Eighteenth Dynasty and the New Kingdom.

Orthodox chronology has dated the period of Cretan links with Egypt to the Twelfth Dynasty, with one solitary piece of evidence from the Hyksos period; Åström, however, has redated most of the scarabs in Crete to the Thirteenth Dynasty, and suggested that the contexts of Cretan material in Egypt could be placed as late. But we have just seen that the term 'Thirteenth Dynasty' carries a misleading suggestion of stability, and that in reality the period was hardly one in which one would expect such a trade. Moreover, Pendlebury lists a number of objects without context in Crete which he dates to the Twelfth Dynasty: these would support the picture of a Twelfth Dynasty connection, and have not been discussed by Åström. On the whole, it seems preferable from a

historical point of view to date the main period of Cretan links with Egypt to the Twelfth Dynasty and the period immediately following it.

Åström's use of the evidence from the rest of the Near East depends entirely on his acceptance of Albright's low chronology. One piece of evidence, the Platanos cylinder-seal, must be dismissed, for it has been shown that the possible ranges of its date of manufacture and of its Cretan context are much wider than has been stated.⁸ Albright's chronology depends on the equation of Yantin-Ammu, a king of Byblos contemporary with Zimri-Lim of Mari and therefore with Hammurabi of Babylon, with Antin or Entin, a king of Byblos contemporary with Neferhotep, one of the last strong kings after the Twelfth Dynasty. Neferhotep's reign has been dated, somewhat conjecturally, to the years 1740-30 B.C. However, even if this equation is correct, it has been shown that Neferhotep and Zimri-Lim cannot themselves have been contemporary on any chronology.⁹ Rather, Antin/Yantin-Ammu must have had a very long reign, that began in the time of one and ended in the time of the other. According to which is placed first, this will fit either the middle or low chronology, and the equation does not therefore force the acceptance of the latter. Thus, while it is impossible to refute Åström from the Near Eastern evidence, we are not forced to accept his arguments either.

8. Branigan, op.cit. (supra, note 5), 29-30.

9. K.A. Kitchen, "Byblos, Egypt and Mari in the Early Second Millennium B.C.", in Orientalia N.S. 36 (1967), 39-54, which summarises previous discussion.

However, it is certainly possible that the chronology is rather too high. If the stone lid bearing the name of Khyan, one of the earlier Hyksos kings, was found in an MM IIIA context, this would suggest a date below 1700 B.C. for the start of MM IIIA, since Khyan is most probably to be dated in the middle or late seventeenth century B.C.¹⁰ Unless we envisage an immensely long MM IIB period, this would pull down the whole MM chronology. But, when there is no agreement on the nature of MM IIIA, it would be unwise to press this. Alternatively, if the Treasure of Tod, deposited in the reign of Ammenemes II (1928-1895 B.C.), has close connection with MM IB,¹¹ this would suggest a long chronology for the earlier phases of MM at least, but the Aegean connections of the Treasure are difficult to date closely. On the whole, it seems best to follow a moderately long chronology, while accepting that there must remain much uncertainty about the details (See FIG.2 for a suggested chronology).

It has been customary to coincide the beginning of LM I with the foundation of the New Kingdom, although Evans finally dated it somewhat later:¹² this has been accepted as no more than a "tidy approximation",¹³

10. Beckerath, *op.cit.* (*supra*, note 7), 223, dates the Hyksos c.1652-1544 B.C., and Khyan c.1614-1594 B.C.: higher dates are possible, and the place of Khyan is purely conjectural, cf. other refs., notes 7, 14.

11. M.S.F. Hood, "The Early and Middle Minoan Periods at Knossos", in Mycenaean Seminar (8th December, 1965), 324.

12. CMP, 110.

13. F.H. Stubbings, "Chronology III: the Aegean Bronze Age" (CAH I, Ch. 6), 74.

and there is in any case a considerable range of possible dates for this event.¹⁴ Arguments of artistic interaction between Egypt and Crete have been used to support this view, but they are difficult to evaluate, and have been denied by Furumark.¹⁵ Two objects found in Egypt have decoration of a type otherwise only found in Crete, a jug from a tomb at Lisht that was reused during the Second Intermediate Period, and an axe from the tomb of Aahotep, the mother of Ahmose, the founder of the New Kingdom, during whose reign she was buried. The jug is closely related to Syro-Palestinian MB II types in shape, but its decoration includes dolphins that can be paralleled from the Knossos Dolphin Fresco, dated MM IIIB, and from MM III - LM I burial-jars from Pachyammos in east Crete.¹⁶ The axe is not of Cretan type, but has a griffin inlaid on the blade that can be paralleled from sealings at Zakro, dated MM IIIB.¹⁷ In both cases, we may note that the dates of the Cretan parallels are not necessarily secure, that the Cretan element is only one of the peculiarities of these objects, and that the appearance of such influence has to be explained. The most that can be concluded from these two objects is that the "tidy

14. K.A. Kitchen, review of J. Hormung, Untersuchungen zur Chronologie des neuen Reiches (1964), in Chronique d'Egypte 40 (1965), 311.

15. Ialysos, 218-21.

16. H.J. Kantor, "Egypt and its Foreign Correlations", in Chronologies in Old World Archaeology (ed. R.W. Ehrich, 1965), 23-4; cf. Archaeology of Crete, 156, and R.B. Seager, The Cemetery at Pachyammos, Crete (1916), Pls. 9, 14, 15.

17. H. Frankfort, "Notes on the Cretan Griffin", in BSA 37 (1936-7), 112-3.

approximation" has a fair chance of being close to the truth: but it is still virtually useless without an agreed date for the beginning of the New Kingdom.

The evidence is much better when we come to the reign of Tuthmosis III. This reign can begin on only one of two dates, 1515 or 1490 B.C., lasting until 1461 or 1436 B.C. respectively: the dates in general use, 1504-1450 B.C., are not correct.¹⁸ For the first twenty years or more, Hatshepsut was Tuthmosis III's senior colleague and in fact sole ruler. There is a good deal of evidence for trade between Egypt and the Aegean in this period. Two objects bearing Tuthmosis III's name are known from the Aegean, and a number of Minoan and Mycenaean vases have been found in Egyptian tombs of his time; there is other early material in both countries without good archaeological context.¹⁹ Also, tomb-paintings of the reigns of Hatshepsut, Tuthmosis III and Amenophis II show certainly Aegean objects being brought as 'tribute'.²⁰ This evidence led Evans to equate LM IB with the reign of Tuthmosis III, which he dated 1504-1450 B.C.; this equation needs to be re-examined.

As shown in Appendix 3 (ii), the imported Aegean pottery in Egypt that can be dated to the reigns of Hatshepsut and Tuthmosis III includes not only LM IB and LH IIA, but also LH IIB. It seems, then, that the

18. Kitchen, op.cit. (supra, note 14), 317, note 5.

19. See Appendix 3.

20. Most recently, J. Vercoutter, L'Égypte et le monde égéen préhellénique (1956).

LM IB destruction-horizon should fall in the reign of Tuthmosis III.

If we accept the dates 1490-1436 B.C. for his reign, following most Egyptologists,²¹ we may retain the date 1450 B.C. for the end of LM IB as a convention, although it could be placed at the end of the reign, since LH IIB had begun before the LM IB destruction, to judge from the evidence from Kea.²²

Much has been made of the tomb-paintings for chronological purposes: Pendlebury dated objects shown in the earliest tomb, that of Senmut, to LM IA, and in the third tomb, that of Rekhmire, to LM IB.²³ I doubt if it is possible to be so precise. The most obviously Cretan or Aegean objects in all the paintings are the metal vases and rhyta, and there is no reason to date these closely, to LM IA or IB. The Knossos tablet K 872 shows clear ideograms for a bull's head rhyton and Vapheio cup, and can hardly be dated before LM II.²⁴ The change in dress in the Tomb of Rekhmire, where kilts were painted over the original loincloths and cod-pieces, has also been used as dating evidence. The kilt certainly seems to be the same as those shown on the Procession Fresco at Knossos:²⁵ this was dated LM IB by Evans

21. Supra, note 18; Gardiner, op.cit. (supra, note 7), 443; R.A. Parker, review of Hornung, op.cit. (supra, note 14), in Revue d'Égyptologie 19 (1967), 185-9.

22. This statement is based on my study of the destruction-deposits, particularly that from House A, Room 1.

23. Archaeology of Crete, 222-3.

24. M. Ventris and J. Chadwick, Documents in Mycenaean Greek (1956), 330.

25. PM II, 719-28; Archaeology of Crete, 199.

and Pendlebury, but the date may require revision. In fact, it does not seem possible to extract any close evidence from the paintings: apart from anything else, we cannot be sure if the details are those of the original scene, or taken from similar scenes at the date of the paintings. They have more importance for the foreign relations of the Aegean than for chronology.

The next period of frequent links between the Aegean and Egypt was the reign of Amenophis III, datable c.1406-1369/7 B.C. in the lower chronology.²⁶ Many scarabs of Amenophis III and his wife Tiye have been found in the Aegean, if rarely in a stratified context: however, one was found in a Knossos tomb with LM IIIA1 and LH IIIA1 vases.²⁷ Two fine vases of LH IIIA1/2 and early LH IIIA2 date were found in the destruction-level of Qatna, while a great quantity of mature LH IIIA2 was found in the palace of Akhenaten at el-Amarna.²⁸ The absolute dates of the reign of Akhenaten and the fall of Qatna are complicated by a controversy over the possibility of a co-regency between Amenophis III and Akhenaten; Kitchen, in a study of the relative chronology,²⁹ put the destruction of Qatna well after Amenophis III's death. This would have the effect of making the Qatna and el-Amarna pottery contemporary, but this could be explained. The two Qatna

26. See Appendix 3.

27. See Appendix 3 (i): Knossos.

28. CMP, 112.

29. K.A. Kitchen, Suppiluliuma and the Amarna Pharaohs (1962).

vases are fine 'palatial' types, that could well have been preserved some time, and may have come from Rhodes, whose stylistic development differed from that of the Argolid, the probable source of the el-Amarna pottery.³⁰ It does not seem likely that the fall of Knossos, to be dated most probably to early LM IIIA2, could have been much later than the death of Amenophis III, and it may be dated conventionally at 1370 B.C.

The relative chronology of the Aegean presents fewer problems, although there is not very much evidence. A late EH III or early MH fragment has been found in a MM IA level of Knossos, MM I-III A pieces were stratified at Lerna, and at Phylakopi MH and MM I-II pieces were found in the same levels.³¹ The phases of LH pottery are closely tied to those of LM: LH I derived its basic inspiration from LM IA, LH IIA included close imitations of LM IB, LH IIB and LM II seem to have influenced one another and LH IIIA1 to have come under influence from LM IIIA1.³² Examples of mainland vases have been found in context with their Cretan stylistic counterparts. The only uncertain area is that of the transition between MH and LH: for to start LH I and LM IA simultaneously is extremely misleading. In fact, the Shaft Graves contained several MM IIIB and LM IA imports with mainly MH material, and

30. CMP, 112; F.H. Stubbings, Mycenaean Pottery from the Levant (1951), 61.

31. Hood, op.cit. (supra, note 11); Caskey 1960 A, 298-9; Phylakopi II, 17-8.

32. MP, 477, 484-6, 495-7, 504-5; Ialysos, 186-7.

only a very few LH I vases;³³ we may justifiably assume that LH I started some time after LM IA.

I have already noted the suggestion that LH I-II were 'rich men's wares', which would imply that apparently MH levels might date anywhere up to the beginning of LH III. Furumark seems to have been ready to believe this, presumably because he believed in a gradual spread of Mycenaean pottery and culture,³⁴ but Wace strongly opposed this view.³⁵ Certainly the less fine Early Mycenaean wares derived directly from the MH tradition: but this cannot be taken to mean that Grey Minyan or late fine Matt-Painted survived past the transitional MH-LH period in the important central area. Outside this area, for example in Messenia, such wares were never common anyway. By the end of LH I, the fine decorated Mycenaean ware seems to have driven out practically all previous fine wares in the area of MH Greece, although it may not have occurred in great quantity in settlement-debris. This theory only seemed plausible in the absence of Early Mycenaean strata from sites: but closer definition of the pottery has shown how rarely pre-LH IIIB structures have survived anywhere. None of the evidence from more recent excavations supports this view, and I think it may safely be forgotten.

33. See below, Ch.III.

34. CMP, 28-9; Ialysos, 172, note 1.

35. A.J.B. Wace, "The History of Greece in the Third and Second Millenniums B.C.", in Historia 2 (1953-54), 85.

Appendix 1

Carbon-14 Dates

Only a few Carbon-14 dates have been calculated for the Aegean Middle and Late Bronze Age (cf. especially E.L. Köhler and E.K. Ralph, "C-14 Dates for Sites in the Mediterranean Area", in AJA 65 (1961), 357-67). Apart from the possibilities of contamination of the sample, the method contains various inherent sources of error (cf. W.F. Libby, "The Accuracy of Radiocarbon Dates", in Antiquity 37 (1963), 213-9). The half-life 5730 ± 40 Before Present is now considered to be more reliable than 5568 ± 30 Before Present: a tentative method for conversion from one to the other is to add 3% to the figure calculated with the older half-life (R.W. Ehrich, Chronologies in Old World Archaeology (1965), vii), while a date B.C. is conventionally arrived at by subtracting 1950. However, E. MacKie, quoted in the September editorial of Antiquity 43 (1969), 171-2, believes that such conversions are not necessarily at all reliable. I have converted the following dates from those quoted in the original publications, but have not included the half-life margin of error.

(1) Radiocarbon 4 (1962), 150. P. 303, 303A: contents of vase from first MH house at Lerna. The second was pretreated for possible humic acid contamination.

P. 303: 1676 ± 59 B.C.

P. 303A: 1912 ± 112 B.C.

(Caskey's figure, in Caskey 1966A, 23, 1948±117 B.C., is based on a 5800 half-life).

(2) Radiocarbon 1 (1959), 107; D. Levi, "Per un nuova Classificazione della Civiltà minoica", in Parola del Passato 15 (1960), 118, note 73.

Pi. 15: a burnt beam from the First Palace at Phaistos, dated by Levi to the end of Protopalatial I, apparently equivalent to the end of MM IIA. The date is the average of two samples that gave results ten years apart.

Pi. 15: 1628±86 B.C.

(3) Radiocarbon 7 (1965), 286; L.H. Sackett and M.R. Popham, "Excavations at Palaikastro VI", in BSA 60 (1965), 251, 314-5.

St. 1263, 1264, 1265, all burnt olive-wood from Palaikastro in East Crete.

St. 1265: 1603±75 B.C. (From late MM III pit, sealed by LM I wall).

St. 1264: 1665±120 B.C. (From threshold of house burnt in LM IB destruction).

St. 1263: 1691±70 B.C. (From pithos, burnt in LM IB destruction).

Appendix 2

Evidence for MM Chronology

(i) Minoan Exports

I have only included in this section exports which seem to be in a definable context, and am grateful for advice on this and other aspects to Mr. G. Cadogan.

EGYPT These are discussed by P. Åström, "Remarks on Middle Minoan Chronology", in KC 15-16 (1961-2) I, 143-4, and by H.J. Kantor, "Egypt and its Foreign Correlations", in Chronologies in Old World Archaeology (ed. R.W. Ehrich, 1965), 21-2.

(1) Harageh R. Engelbach, Harageh (1923), 10; PM II, 212, fig.119. Some twenty sherds were found in dumps between two cemeteries: one with barbotine decoration may be MM IB, but the rest seem MM IIA. Their context included coarse Twelfth Dynasty pottery, one Tell-el-Yahudiyeh sherd, and a block inscribed with the cartouche of Sesostri II (1897-77 B.C.). Tell-el-Yahudiyeh ware is generally dated to the Second Intermediate Period, but can be found in Twelfth Dynasty contexts (J. Bourriau, commenting on review of J. van Seters, The Hyksos: a New Investigation (1966), in JNES 28 (1969), 131).

(2) Abydos J. Garstang, "Note on a Vase of Minoan Fabric from Abydos (Egypt)", in Annals of Archaeology and Anthropology 5 (1913), 107-11. A MM IIA/B holemouth jar from a tomb. The tomb had several shafts, each containing a burial: there does not seem to be much lapse

of time between the burials. The jar was in one shaft, seals of Sesostris III and Ammenemes III (1878-1797 B.C. in all) in others. Astrom states that some of the material has been dated after the Twelfth Dynasty.

(3) Kahun W.M.F. Petrie, Illahun, Kahun and Gurob (1891), 9, pl. 1; BM Cat. I 1, 91-4; W.M.F. Petrie and others, Lahun II (1923), 40, Pl. 32 (middle of top row). Sherds were found in rubbish-dumps and the settlement. This had originally been founded for the builders of the pyramid of Sesostris II (1897-77 B.C.), but Åström has noted post-Twelfth Dynasty material. Most of the pottery came from the dumps, and it was associated with much Tell-el-Yahudiye ware. It has been generally dated MM IIB, but Hood has dated both this and the Harageh material late MM IB and/or early MM IIA (M.S.F. Hood, "The Early and Middle Minoan Periods at Knossos", in Mycenaean Seminar (8th December, 1965), 324).

SYRIA (1) Byblos M. Dunand, Fouilles de Byblos I (1939), 191, fig. 178, Pl. 177. An MM IIA holemouth jar was found in Level X: the date of the latter is not clear.

D. Baramki, The Archaeological Museum of the American University of Beirut (1967), 25, Pl. 3. An MM IIA holemouth jar, purchased with an MM II tomb-group.

(2) Ras Shamra C.F.A. Schaeffer, Ugaritica II (1949), 256-67, fig. 109, Pl. 38. An MM IIA cup from T.86: the tomb is dated by Schaeffer to the beginning of Ugarit Moyen II.

CYPRUS (1) Lapethos J.R. Stewart, "The Early Cypriote Bronze Age", in The Swedish Cyprus Expedition IV: Ia (1962), 283. An MM IA spouted jug from Pennsylvania T. 6A: the tomb is dated by Stewart to the beginning of Early Cypriot IIIB.

(2) Karmi J.R. Stewart, "The Tomb of the Seafarer at Karmi in Cyprus", in OpusAth 4 (1962), 197-204, especially 202-4. An MM IB-IIA cup, found in a tomb: the associated burial is dated by Stewart middle to late in Middle Cypriot I.

(ii) Egyptian Imports

I have only included objects with a definable context: for other Egyptian objects from Crete, all dated to the Twelfth Dynasty, see Aegyptiaca, 7, 9, 13, 15, 33.

(1) Knossos Hood, op.cit. (supra, (i) Kahun). A scarab from the Royal Road excavation: this was found at the top of the MM IIA deposit, but does not certainly belong to it. An MM III deposit was found above. Hood quotes a "late Twelfth or Thirteenth Dynasty" date, Åström ("New Evidence for Middle Minoan Chronology", in Second Cretological Congress, 124-5) a "late Thirteenth Dynasty" date. PM I, 286, fig. 220; Aegyptiaca, 22, no. 29. A diorite statuette, found in an MM IIB deposit, dated "end of Twelfth to early Thirteenth Dynasty"; but Åström (op. cit. (supra, (i)), 144-5) notes that the stratigraphy has been doubted, and suggests a Thirteenth Dynasty date. PM II, 419, fig. 304b; Aegyptiaca, 22, no. 30. A stone lid with the cartouche of Khyan, a Hyksos king, found in an MM IIIA context (cf.

L.R. Palmer, in Nestor, 1st May, 1964, 324-5, and M.S.F. Hood, in Nestor, 1st August, 1964, 342-3).

(2) Lebena S. Alexiou, "Οἱ πρωτομινωκοὶ τέφροι τῆς Λεβήνου", in KC 15-16 (1961-2) I, 91; Åström, op.cit. (supra, (i)), 142. There seems to be some discrepancy in these accounts, but it is agreed that 3 scarabs were found, one in a purely MM IA context, whether in T. I or IIA, and one or both of the others in an EM II - MM IA context. Hood has suggested that some of the pottery was MM IB (op. cit. supra, (i) Kahun). Alexiou and Hood have accepted a Twelfth Dynasty date for the scarabs, but Åström has compared them to Uronarti scarabs, dated c. 1775-50 B.C.

(3) Gournes Aegyptiaca, 15, nos. 17-18; Åström, op.cit. (supra, (i)), 142. 2 scarabs, found in an MM IA level of a tomb. They are dated Twelfth Dynasty by Pendlebury, but Åström has quoted Thirteenth Dynasty and Hyksos parallels.

(4) Platanos Aegyptiaca, 35, nos. 54-6. Three scarabs, found in Tholos B. In the discussion by Branigan (Chronology, note 5), the latest pottery in this tomb is dated MM IB/IIA, and the scarabs late Twelfth or Thirteenth Dynasty, and Thirteenth Dynasty.

Appendix 3Evidence for LB Aegean Chronology before the
Fall of Knossos(i) Egyptian Imports

The majority of Egyptian objects found in early contexts are either not closely datable, but merely assignable to the Eighteenth Dynasty, or obviously out of context, like most of the scarabs of Amenophis III and Tiye. I have not, therefore, listed most of the objects in Aegyptiaca of this date.

- CRETE (1) Knossos "British Archaeology Abroad, 1968", in Antiquity 43 (1969), 98; M. Ervin, "News Letter from Greece", in AJA 73 (1969), 356-7. Amenophis III scarab from Sellopoulo T. 4, which contained 3 burials, LM IIIA1 vases and one vase of LH IIIA1 style.
- (2) Katsamba S. Alexiou, Ὑστερομινωικὸν τάφος λυμένος Κνωσῶν . (Κατσάμπες) (1967), 46. Alabaster jar, with cartouche of Tuthmosis III, found in Tomb Beta, which contained several burials, two decorated LM IIIA1 vases, and several plain vases unlikely to be earlier than LM II. This context is too late for the reign of Tuthmosis III: the jar might be an 'heirloom' or have been brought to Crete after his reign.
- (3) Aghia Triada Aegyptiaca, 9, no. 10. A seal of Tiye, Amenophis III's queen, found in T. 5. Pendlebury and Stubbings date the context LM II or its equivalent (Archaeology of Crete, 222; "Chronology: the Aegean Bronze Age" (CAH I, Ch. 6), 75).

MAINLAND (1) Prosymna Aegyptiaca 59, no. 105. An early Eighteenth Dynasty scarab, possibly of the reign of Hatshepsut, found in T. 14. The only pottery of relevant date is in the dromos: it includes LH IB-IIA and LH IIB types.

(2) Aghios Ilias E. Mastrokostas, in Deltion 19 (1964) B, 296. Amenophis III scarab, found in a chamber tomb. The tomb has only been half-excavated, and so far contains three burials and pottery of LH IIB/IIIA1 to early LH IIIA2 date.

(ii) Aegean Vases in Egypt

These vases are listed in Aegyptiaca, 112-3, and by Wace and Blegen in "Pottery as Evidence for Trade and Colonisation in the Aegean Bronze Age", in Klio 32 (1939), 145-6, here abbreviated as W & B, and are discussed by Furumark in Ialysos, 204-14. On their chronology, see also R.S. Merrillees, The Cypriot Bronze Age Pottery Found in Egypt (1968), 195. I have only included those from contexts of chronological value; none of the vases found in the Levant belong to this class.

(1) From a context before the reign of Hatshepsut and Tuthmosis III
Aniba A squat alabastron, found in a tomb. This was believed by Furumark (Ialysos, 207-8, fig. 17) to be of Syrian origin, incorporating features both of LM IA and LM IB. But the shape does not certainly occur in Crete before LM II, and should perhaps be considered a mainland feature.

(2) From tombs of the reign of Hatshepsut and Tuthmosis III

(1) Gurob Alabastron, dated LM IA by Furumark (W & B, A2; Ialysos,

209, fig. 18A), because of a parallel from Mavrospelio (E.J. Forsdyke, "The Mavrospelio Cemetery at Knossos", in BSA 28 (1926-7), 258, fig. 11). I believe that both vases are LH IIA: shape, decoration and appearance can be paralleled from Korakou.

- (2) Sedment LM IB baggy alabastron (Ialysos, 210, fig. 19C).
- (3) Thebes Tall jar, dated LH IIA by Furumark, who noted that shape and decoration were of Cretan origin (W & B, B1; Ialysos, 212-4, fig. 21).
- (4) Lahun LH IIB squat jug (W & B, E1; Ialysos, 204-5, fig. 15F).
- (5) Saqqara From the same tomb, a saucer and alabastron, dated LH IIA and LH IIB respectively by Furumark (W & B, F1 and A3; Ialysos, 210, fig. 19G, K). I would prefer a date of LH IIB for the former; there is a good parallel for the latter in the Ashmolean Museum, AE.787, from Knossos, dated LM II.

Chapter II

THE MIDDLE HELLADIC CULTURE

(1) Introduction

The concept of a pre-Mycenaean age was inherent in the relatively advanced culture discovered at Mycenae, but finds of identifiably pre-Mycenaean material were at first rare. Schliemann noted at Orchomenos, as an odd fact, that beneath a layer of decorated 'Mycenaean' pottery was one characterised by 'monochrome' pottery of good technical quality, of a type that he had found previously at Mycenae and Tiryns.¹ He tried to link this with early Trojan material, working on the assumption that the burnt Second City was Homer's Troy and contemporary with the finds at Mycenae, but found few parallels. He had originally associated other pottery at Tiryns, that he thought similar to Trojan, with a pre-Mycenaean race whom he believed to have built the great walls.² The pottery of his Sixth City would have provided closer parallels, but he believed that this was Lydian until his last campaign, when it was found associated with Mycenaean.³

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1. H. Schliemann, "Exploration of the Boeotian Orchomenos", in JHS 2 (1882), 152-4; for his earlier discoveries of this ware, see Mycenae and Tiryns, 16-18, 152, fig. 230.
 2. Mycenae and Tiryns, 16.
 3. H. Schliemann, Ilios: City and Country of the Trojans (1879), Ch. 10 passim, and Troja (1884), 193. The discovery of Mycenaean pottery in the Sixth City is described by C. Schuchhardt in Schliemann's Excavations (1891), 330-31; W. Dörpfeld emphasises the chronological consequences on 349.

Meanwhile, Tsountas had found in the Cyclades many graves and some settlements that contained incontestably non-Mycenaean material. In his summary of the Mycenaean culture, he discussed this in some detail,⁴ and came to the conclusion that an 'Island Culture', linked to early Troy and the East, had preceded the Mycenaean in the Cyclades and was partly ancestral to it. Traces of a similar early phase were observed at Tiryns and in Attica.⁵ Tsountas treated Schliemann's monochrome ware as merely one of the Mycenaean wares, relating it to a large class of such wares, sometimes incised, found at Troy and in the Aegean, and believed that the best examples were Trojan imports.⁶ He also distinguished an early Mycenaean ware, decorated in dull paint, that was first developed in the islands and particularly on Thera.⁷

This classification, based on the a priori assumption that plain and incised wares preceded painted, was soon superseded. As a result of the excavations in Melos and Crete, pottery was classified by its development as observable in successive strata. The dazzling finds in Crete seemed to make it clear that the centre of Aegean culture was there, and, although a certain amount of independence was allowed to the 'Cycladic' cultures of Melos and Thera, the 'Mycenaean' of the mainland was reduced to a provincial version of Late Minoan. Its

4. C. Tsountas and J.I. Manatt, The Mycenaean Age (1897), Ch. 10.

5. Tsountas and Manatt, op.cit. (supra, note 4), 23-4, 383, 385-6.

6. Tsountas and Manatt, op.cit. (supra, note 4), 239-40.

7. Tsountas and Manatt, op.cit. (supra, note 4), 240-41, 261.

predecessors were allowed no share in its ancestry: they could not stand comparison with even the Early Cycladic finds, and were consequently largely ignored by historians.

However, much important work was done on the pre-Mycenaean cultures in following years, particularly in Thessaly and central Greece. Interest turned to the earliest settled communities, the Neolithic: but at several sites long sequences divided these from the Mycenaean layers. The most important was Orchomenos in Boeotia, for it was the first to be used as a basis for a sequence of phases comparable to those of Crete and the Cyclades.⁸ Four habitation-strata were found, of which the last was definitely Mycenaean but contained no house-plans. The third, which could be subdivided into three, contained fragmentary remains of straight-walled houses and was eventually called 'Early Mycenaean'. It was characterised by Schliemann's monochrome pottery, which had originally been called 'Minyan', together with the level generally, after the mythical inhabitants of Orchomenos.⁹ The second and first levels had respectively oval and round building-plans.

The first volume of the publication of Orchomenos was primarily concerned with the architecture, and it was left to others to interpret the results. In their study of prehistoric Thessaly,¹⁰ Wace and Thompson, gave much consideration to the finds from Boeotia and Phocis

8. Orchomenos I, 19-69.

9. Orchomenos I, 9.

10. Prehistoric Thessaly, 21-2 for classification, 235-9 for conclusions.

and summarised all prehistoric finds on the mainland, to produce a scheme of its cultural development for the first time. They revived the term 'Minyan', to apply particularly to the grey wheel-made ware found in abundance at Orchomenos and fairly widely in Greece: they also made use of two of the German excavators' terms, 'Urfirnis' for a handmade class coated with a semi-lustrous wash or slip, and 'Mattmalerei' for the ware decorated in dull dark paint that Tsountas had distinguished as the earliest Mycenaean. Urfirnis was characteristic of the lowest layer at Tiryns, and appeared in the second Orchomenos stratum and in post-Neolithic strata in Thessaly; Minyan and Mattmalerei were characteristic of the third Orchomenos stratum, but also appeared with Mycenaean vases, called Late Minoan by Wace and Thompson, in the Shaft Graves, and even with 'LM III' in Thessaly. They concluded that Urfirnis was made earliest in the south, spreading north in progressively later stages, and dated Minyan, thought to be originally a product of Orchomenos, and Mattmalerei no earlier than LM I.

Further work on the interpretation of these finds included two articles on Minyan,¹¹ in one of which Forsdyke suggested that it was brought by Asiatic invaders from Troy, who were later driven back by the Minoans, while in the other Childe suggested that both Minyan and the similar ware of the Sixth City at Troy developed from a previous unified Aegean culture. More important was a synthesis

11. E.J. Forsdyke, "The Pottery Called Minyan Ware", in JHS 34 (1914), 126-56; V.G. Childe, "On the Date and Origin of Minyan Ware", in JHS 35 (1915), 196-207.

by Fimmen,¹² which made a broad division of the whole Aegean Bronze Age into pre-Mycenaean and Mycenaean. The former was represented in Crete by Early and most of Middle Minoan, in the islands by the Cycladic culture, on the mainland by the 'Marina' culture. The last was named by Fimmen after the site Aghia Marina in Phocis, where an Urfirnis stratum, including a dark-coated ware decorated in white, had been found. On the mainland, pre-Mycenaean was followed by Early Mycenaean, characterised by Minyan and Mattmalerei, which Fimmen called respectively Orchomenos Ware and Aegina Ware. He identified examples of both among the Shaft Grave vases, and therefore considered the period to be contemporary with MM III - LM I.

The final and lasting system suggested for the mainland was Wace and Blegen's Helladic system, based on the finds at Korakou, which has been current ever since.¹³ The Urfirnis and Marina wares were assigned to Early Helladic, the Minyan and Mattmalerei, now called Matt-Painted, to Middle Helladic. It is clear that Wace and Blegen considered these last wares to be basically pre-Mycenaean; but the theory that apparently MH strata might in fact be of Late Bronze Age date, equivalent to LM I-II, continued to be popular.¹⁴ Wace strongly opposed this view, and believed that the Mycenaean culture

12. D. Fimmen, Die kretisch-mykenische Kultur (completed 1916, published 1921), especially 125-45, and the table on 210-11.

13. Supra, Introduction, notes 7 and 8.

14. Supra, Introduction, note 16; Ch. I, note 35.

began at very much the same time throughout Greece.¹⁵

The orthodox view of MH culture, presented originally by Wace and Blegen, was that it was brought to Greece, probably from the north, by the ancestors of the Mycenaean population, who violently destroyed the previous EH culture and spread a new and uniform one throughout Greece, at least south of Thessaly if not including it. After a long period of uneventful development and growing prosperity, influence from Crete stimulated these people to produce the Mycenaean culture. Wace always stressed the 'Greek' nature of these people and their place at the beginning of Greek history. But the three hundred years of their development were generally treated very summarily: they provided ancestors for Mycenaean types of house, grave and pottery, but not for Mycenaean art. However, artistic ability was considered to have been always latent: the 'Greek genius' developed it in response to the stimulus of new ideas.¹⁶

Recent archaeological discoveries have affected this picture to some extent. The most important finds have been those of Caskey at Lerna in the Argolid.¹⁷ Here, a particularly flourishing EH II culture, with sophisticated architecture and a high level of prosperity, was violently destroyed, and Caskey has recognised in its destroyers

15. *Supra*, Ch. I, note 36; cf. also R.J. Buck, "Middle Helladic Mattpainted Pottery", in *Hesperia* 33 (1964), 282-3.

16. A.J.B. Wace, in *Antiquity* 28 (1954), 1-3; A.J.B. Wace and F.H. Stubbings, *A Companion to Homer* (1962), 339.

17. See List of Abbreviations for all articles on Lerna.

the forerunners of the MH folk. He has plausibly suggested that these arrived by sea from Anatolia, settled the Argolid and possibly neighbouring areas, and were reinforced at the end of the EH period by related groups, who spread more widely over Greece. This has seemed a very satisfactory explanation, since no good evidence has ever been found to support the theory of the arrival of the Greeks' ancestors from the north, whereas links with Anatolia and particularly Troy have long been apparent. Clearly, even less enthusiasm can be felt for these earliest invaders than for the MH people, since they destroyed a culture of great potential;¹⁸ nevertheless, they were the earliest 'Greeks', and their 'latent artistic sense' was eventually to be responsible for the 'local flowering' that was the origin of Mycenaean culture.¹⁹

I have already discussed the effect that this view has had on study of the MH period, and declared my intention to approach the MH world from a chronological and regional standpoint. I shall begin with the EH III period, when, as Caskey has argued, the forerunners of the MH people appeared, go on to trace the phases of development of MH pottery, and then use this evidence to suggest the history of MH culture in each of the major provinces of Greece. Finally, I shall consider the MH world generally.

18. Cf. E.T. Vermeule, Greece in the Bronze Age (1964), 59, 73.

19. Caskey 1966 A, 26.

(2) The EH III Background

The last phase of the Early Bronze Age on the Greek mainland and in the islands remains rather obscure at present. It was preceded on the mainland by the remarkably uniform EH II culture, which can be traced all over central and south Greece and in the nearest islands, which exerted strong influence, at least, in the Ionian Islands and coastal Thessaly, and which was related to the Cycladic Keros-Syros culture.¹ In the Argolid, the culture reached a high degree of prosperity and sophistication, and the period was one of lively exchange of ideas from Leukas to Troy.² But this 'international spirit' was brought to an end by a strong cultural break, most obvious on the mainland and especially in the Argolid, where the break was marked by a destruction-level at several sites.

Cultures clearly succeeding EH II can be traced in only three areas, the Argolid-Corinthia, Boeotia-Phocis, and central Euboea. The cultures of the first two are closely related, but that of Euboea is completely different: it is, however, succeeded by a variant of the Argolid-Corinthia culture. Following Caskey, I shall use the term 'EH III' only of these. The island of Kea was more closely linked to the mainland than to the Cyclades in EH II, and a variant of the Euboean

1. Caskey 1964 A, passim, 1964 B, 319 (Kea); C. Renfrew, "Cycladic Metallurgy and the Aegean Early Bronze Age", in AJA 71 (1967), 1-20, especially 15-18.

2. Caskey 1964 A, 37; Renfrew, op.cit. (supra, note 1).

culture later appeared there,³ while Aegina has produced material from all over the Aegean;⁴ but in general the islands provide little or no evidence for this period, and certainly nothing that may be closely related to mainland developments.

The Argolid-Corinthia culture is best known through the excavations at Lerna, where it is represented by the Fourth Settlement.⁵ Lerna is the only site to have produced good house-plans of the period: on different parts of the site, four or five architectural phases are represented. The settlement was made up of free-standing houses of the 'megaron' type, roughly aligned in rows, but with no fixed orientation. The basic unit is a long rectangular room, entered at one of the short sides: there was usually a porch, flanked by antae, at this end, while the other might also have antae or be rounded into an apse (Representative examples are shown in FIG.6). The back part of the house, whether apsidal or rectangular, was often walled off, apparently to serve as a storeroom, and might have a separate entrance. Most houses were built of mudbricks on a stone foundation, but one or two examples of timber-framed structures were found.⁶ No clear evidence was found for the type of roof, which may have been flat: at

3. Caskey 1968 B, 68; cf. Caskey 1964 B, 320, Pl. 49:a; BCH Chronique 92 (1968), 950, fig. 9.

4. Aegina, 9-10, figs. 10-18, and unpublished photographs in the German Archaeological Institute at Athens.

5. Caskey 1960 A, 293-9, 1966 B, passim.

6. Caskey 1955, 29, 1956, 151, 162.

Berbati, a storeroom, which may have been exceptional, had a tiled roof.⁷ There was often a fixed hearth in the central room. Good examples of this type of house have been found in Troy I and at Karataş-Semayük in Lycia: at both sites apsidal plans preceded rectangular, and at Karataş-Semayük the houses were built both of stone and mudbrick and of timber and pisé.⁸ Similar houses constructed in wattle-and-daub were found in the last phase of Karanovo in Bulgaria.⁹

A special feature of this period was the 'bothros'.¹⁰ This was a roughly cylindrical pit, usually measuring from 60 cm. to 1 m. in breadth and depth. Examples have been found on many sites in contexts ranging from Neolithic to MH: two-thirds of the total number found at Lerna belonged to the EH III settlement, and they appeared everywhere, both inside and outside houses. They differed from some in having no clay lining, and were clearly used eventually as rubbish-pits, whether or not they began as storage-pits. Their great number may suggest that the occupants of each house at Lerna disposed of their rubbish separately: it seems unlikely that they had any religious significance. Three were found under a clay platform, with two burials of infants,

7. Berbati, 119.

8. Troy I, Plates, figs. 418-9; M.J. Mellink, "Excavations at Karataş-Semayük in Lycia, 1967", in AJA 72 (1968), 245-7, 249.

9. S. Piggott, Ancient Europe (1965), 47, fig. 16:4.

10. Caskey 1960 A, 294.

near the remains of the House of the Tiles,¹¹ but the circumstances are not clear.

The above-noted infant burials, together with two cist-graves from Tiryns,¹² constitute the only certain evidence for burial-customs of this period: a burial dated EH II-III, from Berbati, seems from the associated pottery to be EH II.¹³ Little can be said of them except that they are inhumations, that the skeletons were presumably contracted, and that vases were put with them as grave-gifts. They seem to show that single burial, both intramurally and extramurally, was practised already in EH III.

The pottery and small finds at Lerna constitute a rich and important source of evidence. The pottery is abundant and varied, and belongs to a completely different tradition from that of EH II: little can be said at present about its development at Lerna, but material from Berbati seems to represent a late phase.¹⁴ Best known is the 'Patterned Ware', a fine light-ground ware decorated with linear patterns in lustrous dark paint: there is a wide range of shapes, the commonest being the tankard, deep bowl or cup, and jar, while other types of cup, notably the handleless 'ouzo cup', and several varieties of jug are known (Patterned Ware shapes are shown in FIG.3). Closely

11. Caskey 1955, 36-7, note 20.

12. N.M. Verdelis, in ArchEph 1956, Chronika, 3-4; "Neue geometrische Gräber von Tiryns", in AthMitt 78 (1963), 1.

13. Berbati, 110-11, 123-4.

14. Caskey 1960 A, 295-7.

related in shapes and decoration is 'Aghia Marina Ware', in which the vases are coated with dark paint and decorated in dull white: this is generally found in central Greece, and the rare pieces in the Argolid-Corinthia may be imports. Partially or completely coated vases of coarser fabric, often with the paint simply smeared on, are common: these are generally jars. Two-handled bowls with flaring rims and rounded bodies are extremely common in wares with a coloured slip, red, brown or black; the same bowls, with cups and tankards, are found in fine burnished plain ware (See FIG.3 for examples of the two-handled bowl). A slightly burnished coarse ware, used for domestic purposes, is represented by deep cups and open jars, nearly always decorated by applied knobs on the shoulder, and by small pedestalled cups with perforated sides that may have been used as strainers (See FIG.3). Some large vessels were decorated with clay ridges slashed to resemble rope, and occasionally some extremely odd and ornate shapes were found.¹⁵ The great majority of the pottery was handmade, but a few pieces, mostly two-handled bowls in a grey fabric, showed regular marks that must have been produced by some kind of potter's wheel:¹⁶ such pieces increased slightly in quantity towards the end of the period at Lerna.

The same wares were represented at Berbati,¹⁷ but the proportions

15. E.g. Caskey 1956, Pl. 43:f.

16. Caskey 1966 A, 297.

17. Berbati, 142-57.

were rather different. The deep two-handled bowl with flaring or flattened rim was the commonest shape in all wares except the coarse: deeper krater-like bowls with lug-handles set low on the body, and wide open bowls with thick flattened rim, were also found in coated ware (See FIG.4). The highswung handle was a feature of all the finer wares. The Patterned Ware seems to have degenerated: only one fragment of a tankard was noted, while 'ouzo cups' were completely absent, and the horizontal band-style typical at Lerna and Tiryns was hardly represented.¹⁸ Instead, groups of chevrons and hatched or filled triangles, often pendent from a band, were typical. The coarse ware included open jars with incised decoration of the 'Adriatic' type, a style more often found in MH contexts.¹⁹ The contents of some bothroi are probably the latest published as EH III: they consist of two-handled bowls with painted bands on the shoulder or inside the rim, and bowls in grey ware with exactly similar grooved decoration.²⁰ It is arguable that these should rather be called MH, since all trace of 'typical' EH III, such as the Patterned Ware, has vanished.²¹ There seems to be a general tendency towards simplification of shapes and decoration and a concentration on improving the quality of the grey ware, which is quite clearly the ancestor of Grey Minyan. The chevron-and-triangle style of

18. Berbati, 148-52.

19. Berbati, 154: "Monochrome Ware", no.5.

20. Berbati, 121-3.

21. Cf. Berbati, 121, 130, note 2.

the decorated pottery may be argued to be similarly the ancestor of an important class of early Matt-Painted pottery, as well as of the handmade ware decorated in lustrous dark paint found in early MH Lerna.²²

The most easily recognisable of the EH III wares, Patterned Ware, has been found at many sites in the Argolid-Corinthia, and is notably common at Tiryns:²³ plain and coarse types also seem to have been found at Gonia and Asine.²⁴ A few Aghia Marina Ware sherds have turned up at most sites,²⁵ possibly imports from central Greece. More likely imports are wheelmade plates from Gonia of Euboean type, an odd incised tankard from Korakou, and an 'EC III' duck-vase and Troy IV winged jar from Lerna.²⁶

There was a wide range of small finds at Lerna. Apart from locally made stone hammer-axes and bone pins, there was a quantity of obsidian blades and possibly tanged arrowheads of an early type,²⁷ for which the

22. Caskey 1960 A, 298.

23. Tiryns IV, Pls. 26-31, 33 (Mycenae); Asine, 227, figs. 165-6; Prosymna II, fig. 637:1-20; Zygouries, Pls. 11:4-6, 12:1, 13; J.P. Harland, "The Excavations at Tsoungiza, near Nemea", in AJA 32 (1928), 63; Korakou, 9-10, figs. 9-10; Gonia, 75; C.W. Blegen, "Corinth in Prehistoric Times", in AJA 24 (1920), 6 (Yiriza); F.O. Waage, "An EH Well near Old Corinth", in Hesperia Supplement 8 (1949), 20; CVA, USA 4, Pl. 7:21 (Aietopetra).

24. Gonia, 70-71, 73, figs. 20-21, 24-5; Asine, 218, fig. 160:6-8.

25. Caskey 1960 A, 296, 1966 B, Pl. 52; Korakou, 9, fig. 9:15-6, 20-22, and 11, fig. 11 (Gonia); Berbati, 142, fig. 110; Zygouries, 103; Mycenae (BSA 25), 116.

26. Korakou, 14, fig. 17 (tankard); Caskey 1954, 23, Pl. 11:b (Trojan jar), 1956, 160 (duck-vase); Gonia plates, unpublished in Corinth Museum.

27. J.S. Belmont, and C. Renfrew, "Two Prehistoric Sites on Mykonos", in AJA 68 (1964), 400.

material was almost certainly imported from Melos. One bronze dagger, related to Cretan and Cycladic types, was found²⁸ (see FIG.6). A steatite bead and pendant may have been imported.²⁹ Possibly from Anatolia are an incised clay whorl and embossed bone plaque, which have Trojan parallels:³⁰ a painted terracotta figurine may be related to incised examples from central Anatolia³¹ (see FIG.6). Some conical clay objects that may be stylised figurines continue an EH II tradition,³² as may a few crude seals.³³ Several clay 'anchors' (see FIG.6) may be paralleled in north Greece and the Balkans: two were found at Berbati.³⁴ The tiles from Berbati, noted above, may be descendants of the EH II tiles, but are far larger.³⁵ Finally, the presence of equid bones at

28. Caskey 1955, 43, Pl. 23:a; K.A. Branigan, in Copper and Bronze Working in Early Bronze Age Crete (1968), 28, calls this a spear, but it is surely far too small (13.7 cm).

29. Caskey 1956, Pl. 47:g-h.

30. Caskey 1955, 37, Pl. 22:l (whorl); 1954, Pl. 9:g, and 1960 A, 297 (plaque), cf. J.D. Evans, "Bossed Bone Plaques of the Second Millennium B.C.", in Antiquity 30 (1956), 80-93.

31. Caskey 1955, 43; BCH Chronique 80 (1956), 269, fig.15; cf. S. Lloyd, Early Anatolia (1956), 57, under Alishar and Ahlatlibel, Early Bronze II.

32. Caskey 1956, Pl. 47:j-k; cf. Tiryns IV, Pl. 25:4-8, and Zygouries, 187, fig. 177 (definitely EH II).

33. M.C. Heath, "Early Helladic Clay Sealings from the House of the Tiles at Lerna", in Hesperia 27 (1958), 82-3.

34. Caskey 1956, Pl.47:l-p, 1957, Pl.42:e; Berbati, 127, nos. 28-9; cf. J.D. Evans, "The 'Dolmens' of Malta and the Origins of the Tarxien Cemetery-Culture", in ProcPS 22 (1956), 100, fig.7 (distribution-map), and D.H. Trump, "Pottery 'Anchors'", in Antiquity 34 (1960), 295.

35. Supra, note 7; cf. Caskey 1954, 26.

Lerna is of considerable interest in the context of the arrival of the horse in Greece and the Near East.³⁶ The only identifiable export of this culture is Patterned Ware, which has been found in other parts of the Peloponnese and in central Greece, on Aegina and Ithaka, in Chalcidice, and possibly even at Troy.³⁷

The origins of this culture are not at all clear. The rare use of some sort of potter's wheel, some of the small finds at Lerna, and the presence of equid bones, might suggest at least influence from Anatolia, where the megaron house-plan has good parallels. But wattle-and-daub megara, with associated stone battle-axes and horse-bones, apparently representing an intrusive culture, were found in the final phase of Karanovo in Bulgaria,³⁸ and vases with considerable resemblance to EH III types have been found in EB contexts in Chalcidice,³⁹ and further south at Argissa in north Thessaly.⁴⁰ Shapes like askoid jugs and large jars may even derive from the EH II tradition,⁴¹ and apparently

36. Caskey 1966 A, 22.

37. Asea, 75, fig. 77; Praktika 1965, Pls. 149:γ, 150:γ, 159 (Teikhos Dymaion); Praktika 1931, 72, fig. 3 (Gourzoumisa); Aghios Kosmas, fig. 122:1-4; Eutresis, 121, fig. 166; Orchomenos III, Pl. 50:a-b; Kirrha, Pl. 27; Aegina, 11-12, figs. 10-11; Pelikata, 22-4, fig. 18; Prehistoric Macedonia, 170, fig. 43; Troy II, Plates, fig. 170:10, 185 (more probably Cycladic).

38. V. Mikov, "The Prehistoric Mound of Karanovo", in Archaeology 12 (1959), 97.

39. Prehistoric Macedonia, Pls. 11:183, 190; 12:200-01; 14:244.

40. Excavations in Thessaly, 53, fig. 23:5.

41. Caskey 1960 A, 296.

EH II two-handled bowls have occasionally been found.⁴² But Patterned Ware, one of the most characteristic products of the culture, has no obvious EH II antecedents or parallels elsewhere: at most one may note a family-resemblance between the two-handled bowls, cups and jars of EH III and western Anatolia,⁴³ and a closer parallel between the shapes of three vases from Lerna, Tiryns and Beycesultan.⁴⁴

However, it can hardly be doubted that this was a new culture, brought by new people. It has been unfavourably compared with that of EH II,⁴⁵ and, although this view can be exaggerated, it seems basically correct. There is no sign in Lerna IV of the social organisation that made the construction of the Lerna III fortifications and the House of the Tiles possible; the only possible community-project seems to be a terrace or retaining-wall.⁴⁶ The separated and differently oriented houses might suggest a society that centred more on the individual family than on the community; however, the existence of rows of houses shows that the arrangement of houses was not

42. E.g. Praktika 1953, 113, fig. 6 (Raphina).

43. Cf., for large jars, Samos I, Pl. 40:7; for small jars or deep bowls, Beycesultan I, 128, fig. P. 19:6, 9, 10 (all EB I); for tankards, Samos I, Pl. 41:13-5, Troy II, Plates, fig. 154a; A 44, SS, 61, no. 1419, 139, no. 2692; for kantharoid bowls, Bycesultan I, 208, fig. P. 50:46-7.

44. Caskey 1955, Pl. 21:i; Tiryns IV, Pl. 32:5; Beycesultan I, 212, fig. P. 52:21.

45. E.T. Vermeule, Greece in the Bronze Age (1964), 31, 59; M.S.F. Hood, The Home of the Heroes: the Aegean before the Greeks (1967), 66.

46. Caskey 1956, 160-61.

entirely haphazard. The settlement was certainly prosperous, in touch with the Aegean and Anatolia, but there are no signs of the wealth and artistic ability suggested by the House of the Tiles and the associated sealings.⁴⁷ In fact, Lerna IV seems to show a reversion to village-society; its prosperity and contacts are no more than might be expected of a settlement in a fertile plain close to the coast.

North of the Isthmus, the evidence is less sure and the picture even more obscure. An EH II culture similar to that of the south was widespread, but there are signs of closer links with the Cyclades. The graves of Aghios Kosmas are certainly of Cycladic types:⁴⁸ similar graves have been reported from Boeotia and may have existed in east Attica,⁴⁹ and the rock-cut graves of Manika in Euboea⁵⁰ may be related. The grave-goods of Aghios Kosmas, Manika, and east Attic sites include Cycladic types, particularly the 'frying-pan', and also pyxides, stone vases and occasionally figurines;⁵¹ ultimately Anatolian types of cup and jug, presumably transmitted by the Cyclades, appear both in

47. Heath, op.cit. (supra, note 33), especially 81-3, 116-20.

48. Aghios Kosmas, 153-5.

49. D.R. Theochares, in Praktika 1950, 191, note 1, and 1955, 115; N. Pharaklas, "Περὶ τῆς κατοικίᾳς τῶν Λελέγων ἐν Βοιωτίᾳ", in AthAA 2 (1969), 96-7.

50. Euboean Tombs, 1-20.

51. Aghios Kosmas, especially 73-87 (Graves 3-7), 92-3 (Grave 12); Euboean Tombs, 1-20; supra, note 49.

the graves and in settlements.⁵²

Several sites in Boeotia and Phocis have produced material that either follows EH II stratigraphically or is distinct from it typologically. Kunze distinguished two phases at Orchomenos,⁵³ but was doubtful if they were as distinct as they appeared. The first was more characterised by coated 'Urfirnis' wares, with askoi, bowls with incurved rim, deep kraters, 'Trojan' jugs and large jars as the most popular shapes, the second by Aghia Marina Ware, with tankards, deep cups and bowls, small two-handled jars and large jars (See FIG.4 for characteristic 'northern' shapes). But the bowls and kraters of the first phase may be paralleled from Berbati,⁵⁴ and one house apparently contained two Aghia Marina vases with others characteristic of the first phase.⁵⁵ At Aghia Marina itself, both types were found in the same stratum.⁵⁶ In general, it seems probable that the two phases are merely different chronologically: both have houses of oval plan and bothroi.

Beside the strata at Orchomenos, the culture is represented by houses at Eutresis, a stratum at Aghia Marina, and a few vases at

52. Aghios Kosmas, figs.57-9; Eutresis, 105, fig. 138; Praktika 1952, 143, fig. 10, and 145, fig. 12 (Raphina); Euboean Tombs, Pl. H, vases numbered 1 and 5.

53. Orchomenos III, 10-11.

54. Berbati, 146, nos. 3 and 7.

55. Orchomenos III, Pls.10:2 and 11:3b, were found with Pls.1, 2:2, 14:2, 22:2, 25:5, 26:2.

56. Prehistoric Phocis, 272, fig. 13.

Kirrha.⁵⁷ Some vases from a bothros at Raphina in Attica, and an askoid jug from Thebes also seem to be of EH III types, but appear more closely related to southern EH III.⁵⁸ A complete house of rectangular megaron type and part of another were found at Eutresis;⁵⁹ the houses at Orchomenos, assuming that their plans are complete, were smaller and of apsidal or semi-oval shape⁶⁰ (see FIG.6). Two miniature structures of the same type, that could not have been more than storerooms, were found at Eutresis.⁶¹ Bothroi were common at Orchomenos and have been found at Eutresis.⁶²

The pottery is obviously closely related to that of southern EH III, particularly the finer wares, which include tankards, cups, bowls, and jars. Central Greece has, however, distinctive types of tankard and small jar, often with wavy rim, that are rarely found in the south.⁶³ (See FIG.4). The Aghia Marina and coated wares also include unusual spouted and askoid types. The two-handled bowl does

57. Eutresis, 115-23; Prehistoric Phocis, 270-81; Kirrha, Pls. 23:7, 27, 29.

58. D.R. Theochares, in Praktika 1953, 116-7; Deltion 19 (1964) B, Pl. 222g.

59. Eutresis, 21, fig.17, and 27, fig. 28.

60. Orchomenos I, 35, fig. 9.

61. Eutresis, 26, 28, 29, fig. 29.

62. Orchomenos I, 25-34; Eutresis, 26.

63. Orchomenos III, Pls. 10, 11, 14:2; Eutresis, 117; Caskey 1960 C, 158 (reference to 'trefoil rim'); cf. ArchEph 1956, Chronika, 4, fig. 6.

not seem to have been common, but a similar one-handled cup may have taken its place. The published remains do not allow us to distinguish coloured slip or grey wares, and plain and coarse wares are poorly represented: we may note that a fine plain jug and coarse cup from Eutresis have EH II parallels.⁶⁴ Goldman thought that some of the better pieces, particularly of the Aghia Marina Ware, showed signs of the potter's wheel, but it seems more likely from her description and parallels that the vases were finished on a tournette.⁶⁵

Other evidence about this culture is scanty. At Eutresis small finds included a copper knife, obsidian arrowhead and steatite pendant⁶⁶ (see FIG.6 for the first two). At Aghia Marina a whole series of objects was found in the underlying Neolithic level, close to if not on virgin soil, but seem more likely to belong to EH III: they include two copper daggers (see FIG.6), copper bracelets, a chisel and bone-handled pointed tools, a group of seashells that probably belonged to a necklace, and a conical steatite seal.⁶⁷ At the same site, in the EH III stratum, three cist-burials were found, one, that of a child, being built within the corner of a house: these are the only evidence for burial-customs in the area.⁶⁸ The daggers and knife from these

64. Eutresis, 115, fig. 153:5, and 120 (cf. 104, fig. 137); 119, fig. 162 (cf. Zygouries, 113, fig. 104).

65. Eutresis, 115.

66. Eutresis, 210, fig. 286:7 (knife), 206, fig. 276:4 (arrowhead), 199, Pl. 20:2 (pendant).

67. Prehistoric Phocis, 276-7.

68. Prehistoric Phocis, 272.

sites can be related to Aegean examples;⁶⁹ other signs of foreign influence are a pointed 'depas amphikypellon', part of another, and a pointed cup at Orchomenos.⁷⁰ The depas seems to be locally made: its closest parallel is from Troy IV.⁷¹ The cup may come from the north, since it is paralleled from Argissa.⁷² Neither is securely placed in the strata, but they may be taken to be of EH III date like the overwhelming majority of the pottery. Exports of Aghia Marina Ware, mainly pieces of tankards, have been noted in the Argolid-Corinthia: two pieces come from Euboean sites, with coated pottery probably from this area.⁷³

The culture is obviously very incompletely known, and there is no site like Lerna that shows the transition from EH III to MH. Eutresis was destroyed, and seems to have been deserted thereafter for a while:⁷⁴ at Kirrha, the soundings are too small to allow the traces of destruction to be dated certainly,⁷⁵ and we have very little information about the

69. The Aghia Marina daggers seem to belong to Renfrew's Types III and V (op.cit., supra, note 1); for Eutresis knife, cf. Caskey 1955, 46, Pl.23:b (EH II), and H. Schliemann, Ilios: City and Country of the Trojans, 25, no. 119.

70. Orchomenos III, 56-7, Pl. 23:1-2.

71. Troy II, Plates, fig. 160: 37-878.

72. Excavations in Thessaly, 51, fig. 21:8; perhaps cf. Prehistoric Macedonia, 168, fig. 39.

73. Supra, note 25; Lefkandi, 9; Prehistoric Euboea, 38, note 24.

74. Eutresis, 231; the absence of early MH types is my reason for suggesting that the site was deserted for a while.

75. Caskey 1966 A, 12.

MH strata at Orchomenos and Aghia Marina. This also seems to have been an intrusive culture, but there seems to be greater continuity in the pottery from EH II, and there are no certain signs of destructions accompanying the 'invasion'. There are close links with the EH III of the Argolid-Corinthia, but also some surprising differences, notably the absence of the two-handled bowl. It may be significant that Aghia Marina was resettled in EH III, having apparently lain deserted since the Neolithic period. The small finds, particularly the copper weapons and tools, seem to suggest that this area also had overseas contacts.

On Euboea remains of a completely different culture have been excavated at Lefkandi, and related material has been reported from other Euboean sites, particularly Manika:⁷⁶ surface surveys and the excavation of Manika have shown that the EH II culture flourished here previously.⁷⁷ Lefkandi was a new settlement: several strata have been identified, but there is no good architectural evidence, and the pottery is the only material by which the culture can be judged. Its most notable feature is the wheel-made plate, a shape characteristic of west Anatolian EB II-III; other shapes are the bowl with incurved rim, various cups and small jugs, and beak-spouted jugs, all of which can also be paralleled in western Anatolia. (See FIG.5 for these shapes).

76. Lefkandi, 7-9, for discussion of the first phases; Mr. R. Howell informs me that material similar to that of the first phase has also been found at Magoula and Amarynthos in central Euboea, and Oreoi in the north.

77. Prehistoric Euboea, passim, especially 87, 89.

Wares are plain or coated with a coloured wash: there is a dark-coated group that may be related to the Urfirmis of the mainland, including two possible imports, but no decorated ware. Plate- and bowl-sherds, and fragments of a coated jar and high-handled jug were also found at Manika, whose tombs contain a number of high-spouted jugs that could belong to this phase.⁷⁸ Wheel-made plates of Euboean type have been identified as far away as Volos and Gonia.⁷⁹ On the evidence of the pottery, this culture can hardly derive from anywhere but western Anatolia.

The second phase at Lefkandi is almost completely different from the first. It is characterised by two-handled bowls in varieties of grey ware, by a dark-on-light decorated ware, coloured slip and plain wares, and a coarse ware that is often well polished and usually decorated with applied knobs. The parallels with Lerna EH III are obvious. A fragment of an 'ouzo cup' and of Aghia Marina Ware are probably imported from the mainland. The dominance of the two-handled bowl and the poor quality of the decorated ware suggest that this phase is connected with later EH III of the Argolid-Corinthia type. In the next phase, there is more and better-made grey ware, which sometimes has decoration of grooved lines, and patterned ware is very rare: this may be linked to the latest Berbati material and cover the EH III - MH

78. D.H. French, "Anatolian Pottery in the Aegean Area", in AnatSt 16 (1966), 49-50, 53, fig. 7:3-6; Prehistoric Euboea, 57, note 67, 88, fig. 19:25; Euboean Tombs, Pls. Z:2, Θ'.

79. I owe this information to Mr. R. Howell.

transition. The appearance of the earlier culture may be connected with earlier Cycladic influence on Euboea, most obvious in the contents of the Manika tombs, and the presence in the Cyclades of 'Anatolian' material, as will be noted below; the second phase presumably marks the extension of mainland influence to Euboea, probably involving new settlers. A certain amount of continuity between the two might suggest a peaceful mingling of the two cultures.

There is little or nothing from other areas at Greece that can be termed EH III. Area C at Aghios Kosmas contained a coated bowl and jar and Patterned Ware sherds;⁸⁰ vases from a bothros at Raphina have already been noted.⁸¹ At Pelikata in Ithaka some two-handled bowls may be connected with the EH III type.⁸² An equivalent phase may have existed in Thessaly: Urfirnis bowls, askoi and jars are characteristic of a particular phase at Lianokladhi, Tsani and Argissa, and two jars from Volos and Neleia have an EH III appearance.⁸³ All may be related to the first EH III phase at Orchomenos rather than EH II Urfirnis: sauceboat sherds have, however, been noted at Neleia.⁸⁴ At Argissa, a clumsy thick-walled ware decorated with knobs, has some parallels

80. Aghios Kosmas, 46-7.

81. Supra, note 57.

82. Pelikata, 25, fig. 20, and 26; cf. Caskey 1964 A, 23.

83. Prehistoric Thessaly, 144-5 (Tsani), 178-9 (Lianokladhi); Excavations in Thessaly, 26-8, and 52, fig. 22, 53, fig. 23:8; cf. Orchomenos III, Pls. 2, 3:2, 9:4-5, 27.

84. D.R. Theochares, in Praktika 1957, 65.

with the EH III coarse ware.⁸⁵ But there were no traces of a decorated ware or of the two-handled bowl and other characteristic shapes, and the houses of this period at Argissa were all timber-framed.⁸⁶ The phase was ended by destruction at Argissa, and perhaps Neleia:⁸⁷ it was followed at Argissa by a sudden change in architectural technique, to the use of mudbrick on stone foundations. The clumsy coarse ware continued, but the fine coated ware was replaced by relatively poorly-made plain wares, which included a variety of two-handled bowls and jars. Many fragments of a whitish-green ware decorated in red were found in the first level: a similar incised ware appeared later. In this phase, links with the Helladic sequence seem less clear and close, and it is not until the fifth level that MH Grey Minyan appears, as an imported ware. There seems, then, to have been a fairly radical change about the end of EH III at Argissa: but there is no evidence from the rest of Thessaly to show whether or not this change was general.

If the Euboean culture, and possibly the EH III cultures, came from Anatolia, we would expect signs of their passage through the Cyclades. We have already noted the presence of a culture like the Euboean on Kea; the fortress at Kastri on Syros seems to have been occupied to the Troy III-IV transition, having many examples of the 'depas

85. Excavations in Thessaly, 28, and 53, fig. 23:3-5, 7.

86. Excavations in Thessaly, 27.

87. Excavations in Thessaly, 27-8; D.R. Theochares, in Praktika 1957, 60.

amphikypellon'.⁸⁸ Jugs from Syros, Siphnos and Naxos belong to an Anatolian type,⁸⁹ and one sherd from Tenos to an Anatolian carinated bowl.⁹⁰ The duck-vase, apparently originally Cycladic, spread to Samos and Beycesultan.⁹¹ Caskey has noted some parallels between Phylakopi I types and those of Samos and Troy IV-V,⁹² and the painted ware seems to have some connections with that of Karataş-Semayük.⁹³ This all provides evidence for links between the Cyclades and Anatolia, probably covering most of the Early Bronze Age, but, except on Kea, none of the parallels are really close or mark a strong break with the past.

Whatever their origin, it seems that the group that settled the Argolid-Corinthia rose to dominate central and southern Greece. For we must recognise in their grey ware, later Patterned Ware, coarse ware and houses, the ancestors of MH types. Grey Minyan's high quality was achieved after experiment,⁹⁴ rather than being introduced fully developed,

88. Supra, note 3; E.M. Bossert, "Kastri auf Syros: Vorbericht über eine Untersuchung der prähistorische Siedlung", in Deltion 22 (1967) A, 53-76.

89. Kykladika II, Pl. 9:5, 7, 11; N. Åberg, Bronzezeitliche und früheisenzeitliche Chronologie IV, (1933), 85-6.

90. French, op.cit. (supra, note 78), 53, fig. 7:2.

91. Beycesultan I, Pls. 15:2, 18, 19:8; Samos I, Pls. 38:16, 42:17, 49:15-19.

92. Caskey 1964 A, 26.

93. Compare AJA 70 (1966), Pls. 58-9, with Phylakopi I, Pl. 9.

94. Lefkandi, 9.

and the carinated shapes so often called typical seem to be a later development from the rounded bowls. There is a little evidence that single burial was already becoming common in EH III, although the typical slab-sided cist did not appear until MH. Given this situation, it is legitimate to wonder whether the second invasion at the end of the Early Bronze Age postulated by Caskey is really necessary.

The often-cited destructions should be considered in this connection. Using Caskey's terminology, Lerna, Zygyouries, Aghios Kosmas, Asea and probably Asine were destroyed at the end of EH II; other probabilities are Tiryns, Korakou, Raphina and Kirrha.⁹⁵ Askitarion seems to have been deserted, as many other sites may have been.⁹⁶ Eutresis was definitely destroyed in EH III, as Tsoungiza near Nemea is said to have been,⁹⁷ and Berbati at the end of EH III or early in MH. Of the latter, only that of Eutresis can be shown to be as widespread on the site as those of EH II elsewhere; only a single terrace was excavated at Berbati and a small area at Tsoungiza. These might, then, be due to accident or small-scale local hostilities: the record at Lerna in EH II and MH shows many fires that can be attributed to similar causes.⁹⁸ That of Eutresis might be the result of a spread of the Argolid-Corinthia people, if the spread of their culture was effected by emigration. In any case, the evidence for

95. Caskey 1960 A, 300-01, 1964 A, 12, 14; Asea, 11-12.

96. D.R. Theochares, in Praktika 1954, 104.

97. Eutresis, supra, note 74; Harland, op.cit. (supra, note 23).

98. E.g. the EH II fortifications (Caskey 1958, 134), and MH Houses 98A (Caskey 1956, 159, 1957, 119) and M (Caskey 1954, 15).

these destructions is not nearly as compelling as that of an almost complete cultural break in the areas that I have considered, which at Lerna may be associated with a social change. There is no such break between EH III and MH, but merely a few explicable changes. In such basic matters as their architecture, the bulk of their pottery, and possibly their burial-rites, the MH people seem to derive completely from EH III, and their way of life seems to have remained unchanged.

(3) The MH Pottery Sequence

MH pottery is often described so summarily as to leave the impression that for three hundred years MH potters were content to produce the same types. Blegen¹ suggested a division into two phases, the first characterised by Grey Minyan and coarse Matt-Painted, the second by Yellow Minyan, fine Matt-Painted and other decorated wares. This stylistic division has not been generally followed; instead, MH has been divided into three or more phases on the basis of the stratigraphy at various sites. It is not surprising that material assigned to these phases should differ from site to site, since it is hardly to be expected that sites should share the same architectural history. Wace² doubted that general rules could be applied, but believed that considerable development could be observed: Vermeule³ seems to follow him, but Caskey,⁴ while recognising that early and late characteristics could be distinguished, treats the pottery as a whole. In his study of Matt-Painted pottery,⁵ Buck attempted to combine Blegen's stylistic division with the stratigraphy to be observed at certain key sites, and followed Caskey in beginning MH with the first appearance of Matt-Painted.

1. Korakou, 121.

2. A.J.B. Wace, "The History of Greece in the Third and Second Millenniums B.C.", in Historia 2 (1953-4), 84-5.

3. E.T. Vermeule, Greece in the Bronze Age (1964), 334-5.

4. Caskey 1966 A, 4-6, 21-2.

5. R.J. Buck, "Middle Helladic Mattpainted Pottery", in Hesperia 33 (1964), 231-313.

This was a welcome attempt to formulate general criteria, but relied on the assumption that the earliest represented MH phase at a site was early in absolute terms. I believe that in at least one important case, Eutresis, this was not so, and that it would be better to use in the first instance only evidence from Lerna and Lefkandi, where an unbroken sequence from EH III to late MH seems assured. The development of the pottery at the latter has been described in some detail,⁶ and the preliminary reports of Lerna, with Buck's discussion, have provided useful information. At many other sites, groups assignable to particular phases have been found, but no similar sequences, except in the unpublished trials from Gonia:⁷ the EB-MB sequence at Argissa in Thessaly is rather remote from the Helladic. The best evidence for development is that provided by the Minyan wares, and I shall use them as the basis for stylistic divisions (FIG. 7 shows the development of Minyan shapes): the resulting sequence will hold good primarily for the area where Grey Minyan was in common use, which is roughly the same area as that of the EH III cultures just discussed.

On the basis of the finds, I think that MH pottery can be divided into four phases. The first, which I shall call 'Early Minyan', is well represented: house-deposits have been found at Lerna, Asine, Asea and Kirrha, and occupation-strata at Lefkandi, Argos and

6. Lefkandi, 8-11.

7. I have studied the material from Gonia in the Corinth Museum and had the benefit of discussing it with Mr. R. Howell.

Gonia.⁸ The dominant shape is a better version of the EH III two-handled bowl (see FIG.3), with two strap or highswung handles, which is found in grey, slipped, plain and coarse wares. The grey ware, clearly descended from the EH III grey ware, was fairly common, and now has all the characteristics of Grey Minyan, being generally wheel-made and of fine quality, with a high polish and the often noted soapy feel. The slipped and plain wares have often been termed 'Minyan' too, because they include the same shapes, but this becomes misleading when the term is extended to cover all slipped and plain vases: only a few plain bowls of this period had the 'Minyan' polish. Such bowls continued to have incised grooves on the shoulder in some cases. Other types of bowl, high-handled cups, and small jars have also been found in these finer wares.⁹ Deep cups of the EH III type continued to be one of the most popular shapes in coarse ware and to be decorated either with applied knobs or herringbone incision: other coarse shapes have been found.¹⁰ Perforated pedestal-cups, found in EH III contexts at Lerna and Berbati, have appeared in early MH at Asine and Kirrha,¹¹ underlining the essential continuity of the periods. Tall storage-jars with narrow

8. Caskey 1954, 16, and 1955, 31-2 (House D), 1956, 159-60, and 1957, 149-50 (House 98A); Asine, 263-5 (House T); Asea, 17, 105-6 (Houses B and H); Kirrha, 83-5 ('MH IA'); Lefkandi, 9 (Phase 3); Argos: Deiras, 136 (First phase).

9. Caskey 1957, 150; Asine, 265, fig. 184:4; Lefkandi, 9, fig. 9.

10. E.g. Asea, 104-5, figs. 102-3.

11. Caskey 1956, Pl. 43:d; Berbati, 156; Asine, 265, fig. 184:1; Kirrha, Pl. 48:14.

flaring necks, ovoid bodies and horizontal rounded or crescent-shaped handles, have been found in many wares, particularly at Lerna:¹² again, they clearly derive from EH III. This is Buck's shape C5 (FIG.8), and Matt-Painted examples have certainly been found at Lerna and Argos:¹³ similar vases at Lerna apparently continued the EH III Patterned Ware tradition, since they were decorated in lustrous dark paint.¹⁴ Some had accessory decoration in white, while others were completely coated in dark paint and decorated in white.¹⁵ The earliest barrel-jars, Buck's shape C1 (FIG.8), also seem to have been found at Lerna at this time: the shape can be paralleled from the Cyclades, but from the first the mainland examples were decorated with vertical panels, a style difficult to parallel in the Cyclades.¹⁶ All these decorated types were most common in the Argolid: fine Grey Minyan was common at Lefkandi, but the only painted ware was a degenerate descendant of the earlier one deriving from Patterned Ware. Neither Grey Minyan nor painted wares were common in the earliest phases at Asine and Asea.¹⁷

12. Caskey 1957, 150.

13. Caskey 1957, 150; Argos: Deiras, Pl. 15:7-19.

14. Caskey 1960 A, 298.

15. Caskey 1955, Pl. 17:e.

16. Buck, op.cit. (supra, note 5), 287, with note 26, where examples from House 98A are referred to; cf. Phylakopi I, 96-7, Pls. 7:1-5, 8:4.

17. The house deposits noted above (note 8), contained no Matt-Painted; House T at Asine had rather crude Grey Minyan (Asine, 264).

The second phase, which I shall call 'Decorated Minyan', only differs from the first in a few respects, but these are important. By the end of it, MH types were widely found in the Peloponnese and central Greece, and the early repertory of Matt-Painted ware was complete. Its major characteristic is the decoration of Grey Minyan and its slipped and plain imitations by incision and wheelmade ridging and grooving. A particularly common type of this period was the 'Argive Minyan' bowl, which had a thick, highly-polished black slip, three or four sharp raised ridges on the shoulder, and incised festoons on the lower body: the same type has been found in Grey Minyan¹⁸ (see FIG.7). Common in Grey Minyan and plain wares was a bowl with parallel grooving on the shoulder, a clear development from the earlier incised types; some may also be grooved inside the rim, and a rare, probably early, type at Berbati has grooving over most of the body.¹⁹ Other types of decoration, such as stamped circles or incised triangles, have occasionally been found. The shapes of these decorated bowls show some development: the rim may be flattened into a collar-rim, and the body slightly carinated at the base of the shoulder, while the lower body's profile is more straight than rounded. As well as the more usual strap-handle, lug- and roll-handles have been found on these bowls.²⁰ A great increase in the quantity of incised coarse ware, noted at

18. E.g. Berbati, 125, fig. 101.

19. Berbati, 153, fig. 122:5a-b.

20. Cf. Eutresis, 133.

Argos,²¹ may be a parallel phenomenon.

The early Matt-Painted ware was now common, in a number of shapes. The earliest shape at Argos, beside the water-jar, was the bowl, with either incurved, or straight, slightly thickened rim, Buck's types A1 and A4. (See FIG.8). Buck has adduced Cycladic parallels but the same types have been found in the EH III coated ware of Berbati.²² Other shapes are an open spouted bowl, Buck's B2, three varieties of jug, two high-beaked, Buck's B8-10, and a wide-mouthed krater-like jar, Buck's C2 (For all these, see FIG.8). A characteristic of the jar-shapes and the shallow bowl is the horizontal crescent-shaped handle or lug. The decoration is very simple: the bowls were decorated on the shoulder with zigzags, groups of diagonal lines or crossed lines between groups of bars, the spouted bowl and jars with thickly drawn pendent triangles and dashes, and the barrel-jar with vertical panels of zigzags, crossed lines, or circles with crossed lines in the centre (~~Examples are shown on FIG.~~). The lustrous dark-on-light also continued, almost exclusively decorated with horizontal bands of hatched triangles. The motifs are in general so simple that parallels are not hard to find in the Cycladic wares; but I think that the shoulder-decoration of the jugs, and several of the shapes, suggest continuity from the EH III Patterned Ware tradition. The appearance of the kalathos at Argos is a peculiarity:²³ examples have not been found

21. Argos: Deiras, 136.

22. Berbati, 151, fig. 120:9-10, 12-14.

23. Argos: Aspis I, 27, figs. 43-6.

anywhere else. A Matt-Painted cup with one high handle of roughly this date has also been found at Argos, an antecedent of the kantharos:²⁴ it suggests that there may have been a class of small Matt-Painted vases, although the great bulk were obviously storage and household vessels.

The third phase, which I shall call 'Angular Minyan', is characterised by the angular shapes so often considered typical Grey Minyan, examples of which have been very widely found. Properly stratified material is less common, but is well represented at Lerna, Lefkandi and Eutresis:²⁵ separate houses of this phase have been found at Korakou and Eleusis.²⁶ The carinating tendency noted on Minyan bowls of the previous phase has now been fully developed. Probably the earliest are heavy strap-handled bowls, carinated at the shoulder, with a beaded rim and slightly raised base (see FIG.7): the others, which become extremely common, are the shallow angular kantharos and ring-stemmed goblet, which is basically a carinated bowl on a stem (see FIG.7). The goblet may have either strap-handles or vertical rounded handles set on the rim, like earlier plain bowls.²⁷ These shapes are most commonly found in Grey Minyan, but can occur in plain ware: the first 'Yellow

24. BCH Chronique 91, (1967), 820, fig. 13.

25. Caskey 1954, 10, 15, and 1957, 146; Lefkandi, 10 (Phase 5); Eutresis, 33-51 (First Building Period; probably belongs to second half of period).

26. Korakou, 76-9, fig. 110; Eleusis, 17-29.

27. Lefkandi, 10 (Phase 4).

Minyan' goblets and kantharoi, similar in consistency, feel and polish to Grey Minyan, appeared at this stage, and dark brown examples have even been found.²⁸ These varieties seem to have been produced by special firing.²⁹ North of the Isthmus, the tradition of decorating the vase seems to have been partly maintained: both kantharoi and goblets with grooving or ridging on the shoulder have been found.³⁰

Once established, these shapes lasted to the end of the MH period with very little change. They represent the highest achievement of MH potters in this ware, and were the only MH vases to be widely exported.³¹ The ring-stemmed goblet was imitated at Phylakopi and at Molyvopyrgo in Chalcidice.³² This shape also appeared at Troy in the Sixth City:³³ other features of this period, notably the prevalence of a grey ware very similar in appearance to Grey Minyan, have led to the theory that there was a close relationship between the MH and Troy VI populations.³⁴ However, it should now be clear that Grey Minyan had a

28. Unpublished, from Orchomenos, in the National Museum at Athens.

29. Eutresis, 135; Caskey 1966 B, 5.

30. Eutresis, 139, fig. 187:2; Dhimini and Sesklo, 139, fig. 40, and 141, fig. 45.

31. Cyclades, 15-16; Caskey 1962, 268, 1964 B, 329; F. Biancofiore, Civiltà micenea nell' Italia meridionale (1967), 37-41, Pls. I, II:a-b, e-1; PM II, 309.

32. Phylakopi II, 17; Prehistoric Macedonia, 210-11, nos. 398-9, figs. 77-9.

33. Troy III, Plates, figs. 423:1-4, 424:3, 427:24-9.

34. Most recently, J. Mellaart, "The End of the Early Bronze Age in Anatolia and the Aegean", in AJA 62 (1958), 1-33, especially 15-21.

long history on the mainland before the appearance of the types paralleled in Troy: it is therefore impossible chronologically that the two populations should represent branches of the same stock, one of which entered Greece and the other the Troad. In fact, the bulk of the Trojan 'Grey Minyan' shapes cannot be paralleled in Greece: only the ring-stemmed goblet (whose stem is in fact usually ridged or incised with rings), the use of grooving and ridging on vase-shoulders, and the vertical handles set on the rim of some Trojan bowls show a connection with MH types.³⁵ It may be suggested that MH influence is responsible for the appearance of these types, as at Molyvopyrgo: at present this seems the most likely explanation, but the contact between MH Greece and Troy remains somewhat surprising.

There is not much to be said of the other wares in this period. The plain and Matt-Painted wares became thinner-walled and finer. A new shape, the kantharos, Buck's All, appeared in Matt-Painted: it might have one or two handles, and was consistently decorated with opposed triangles on the upper body and festoons on the lower (see FIG.8). Such kantharoi were generally made in a fine yellow-buff or yellow-green ware, the first 'fine' Matt-Painted. Coated and light-on-dark wares continued, but do not seem to have been very common.³⁶ Ring-bases and small raised bases began to appear on the smaller vases late in the

35. Troy III, Plates, op.cit. (supra, note 33) and fig. 292a: shapes A 57-62.

36. Caskey 1957, 146; Eutresis, 127, figs. 170, 172; 130-31, figs. 174-5.

period, as part of the tendency towards finer pottery.³⁷

Finally comes what I shall call simply the 'Late Phase'. This is not well represented on sites of the Argolid by house-groups or strata,³⁸ but is the period of the Prosymna and Corinth cemeteries and of Grave Circle B at Mycenae.³⁹ North of the Isthmus, the evidence from sites is somewhat better,⁴⁰ but tombs have rarely been found, apart from the cemetery at Eleusis.⁴¹ The Minyan types continued, remaining particularly popular north of the Isthmus: Yellow Minyan goblets were also common south of the Isthmus, appearing frequently in graves of Circle B. The northern examples seem to have continued to have ringed stems, but in the south the stems were simply decorated with incised rings: plain stems have also been found, and a low-stemmed goblet began to appear.⁴² The large Matt-Painted and plain vessels continued to appear in quantity: the better examples might be decorated simply in two colours.⁴³

37. Lefkandi, 10 (Phase 5).

38. Asine, 284-7 (Group in upper stratum of House B), is an exception.

39. Prosymna I, Ch. IV; C.W. Blegen, Corinth, Vol. XIII: the North Cemetery (1964), Part I; G.E. Mylonas, Ancient Mycenae (1957), 130-65.

40. Lefkandi, 10 (Phase 6); Eutresis, 51-60 (Second and third building periods); Kirrha, 91-4 ('MH IIIB'); Prehistoric Phocis, 256-7 (Piperis site near Drachmani).

41. G.E. Mylonas, preliminary reports in Praktika 1952, 58-72; 1953, 77-87; 1954, 50-65; 1955, 67-77; 1956, 67-72.

42. Incised stems: Asine, 185, fig. 197: 37-8; Praktika 1952, 437, fig. 7 (Grave Beta); plain stems: Eutresis, 136, fig. 184:4-5, Prehistoric Phocis, 262, fig. 10, second from right; low stem: Asine, 287, fig. 198:9; Prehistoric Phocis, 262, fig. 10, left.

43. E.g. Eutresis, 174, fig. 242:2-3.

Much more important is the development of a class of small finely-made vases, cups, goblets, jugs, jars and askoi, that were particularly common in the graves of the Argolid-Corinthia and Eleusis, and spread, probably as imports, to Laconia and Messenia.⁴⁴ These appeared indifferently in Grey Minyan, fine plain, Matt-Painted and light-on-dark wares, and there is good evidence for regional schools and preferences. In the Argolid-Corinthia, all these wares flourished, and this area seems to have been the major centre of development for the fine late Matt-Painted style and a parallel light-on-dark style, using white or creamy yellow paint on a glossy red or black ground. The surface of the vase was generally broken up by groups of bands and bars into panels, which might be filled by isolated motifs such as the double spiral, quirk, dot-rosette and swastika, by rows of dots or dashes, by running spirals and wavy lines, or by filled triangles. In Phocis, a school using animal-motifs, notably birds, dolphins and insects, flourished in Matt-Painted and bichrome wares.⁴⁵ In Boeotia and Euboea, only large closed vases and heavy goblets, sometimes decorated in bichrome style, seem to have been at all common.⁴⁶ At Eleusis, fine small Grey Minyan

44. AthMitt 52 (1927), Pl. 1:4-5 (Amyklaion); BSA 16 (1909-10), 73, fig. 2:f (Geraki); Malthi, Pls. 4:22, 23:B 10, C; Samikon, Pl. 9:α, 20:α; Praktika 1960, Pl. 160α, two on right on next to lowest row (Peristeria); AJA 70 (1966), Pl. 25: fig. 6, central row, left (Pylos).

45. Kirrha, Pls. 31-3.

46. Eutresis, 170-74, Pls. 17-18; Lefkandi, 10 (Phase 6); Orchomenos, unpublished in National Museum, Athens.

vases were particularly popular.⁴⁷ The bichrome 'bird-jug' style was probably one of the latest developments in the Argolid: examples have been found in Thessaly and Messenia.⁴⁸ (See FIGS. 9-10 for shapes and some examples of all these).

Much foreign influence may be detected in these late fine wares. Of the shapes, the 'Vapheio cup' and holemouth jar are surely of Cretan origin, the 'egg-cup' and 'bird-jug' Cycladic.⁴⁹ The introduction of animal-motifs may be attributed to Cycladic, and of the spiral to more generally Aegean influence.⁵⁰ But there is also a considerable local element to be considered: the loop-handled jar (see FIG. 9), stemmed cup and goblet, and large jar, are mainland shapes, and the panelled Matt-Painted style seems to have been developed on the mainland. The fine light-on-dark vases have been held to be imitations of MM III,⁵¹ but it is unlikely that they are anything so specific: a light-on-dark ware, including probable imitations of MM, existed earlier in the MH period,⁵² and it is more likely that these

47. From cemetery, unpublished in Eleusis Museum.

48. SG, 164, figs. 80-81, cf. also jar on Pl. 174:948 for style; for exports, see Archaeology 11 (1958), 15 (Iolkos); Samikon, Pl. 6:α.

49. C. Zervos, L'Art de la Crète. (1956), 264, figs. 372-3 (holemouth jar), 265, figs. 375:b, 378 ('Vapheio cup'); Phylakopi I, Pls. 16:4-7 ('egg-cup'), 23:5 ('bird jug').

50. Korakou, 25.

51. Korakou, 32.

52. Caskey 1954, Pl. 8:α-e show probable MM influence.

vases were the latest development of this tradition. In general, the existence of these late fine wares shows an increased interest in the production of fine pottery and in foreign styles, and a considerable amount of experiment, often successful. The atmosphere thus produced was favourable to the introduction of Mycenaean painted ware, which was quickly to drive the other wares off the market.

I commented earlier that a form of potter's wheel seemed to have been introduced in EH III. From the evidence of Lerna, Berbati and Lefkandi,⁵³ it does not seem to have been much used before the end of EH III. Its use was associated with grey ware from the first at Lerna, and true Grey Minyan, which became established early in MH, was certainly made on the fast wheel.⁵⁴ The fast wheel seems to have been introduced into Crete in MM IB, and was used for the finest wares:⁵⁵ coarser household wares continued to be made by hand. The same seems to have been the case on the mainland, where the use of the wheel seems to have been even more restricted. The wares imitating Minyan seem to have been more usually handmade, and even Yellow Minyan goblets often show no signs of having been turned on the wheel.⁵⁶ The early coarse Matt-Painted vases were also handmade, like their counterparts

53. Caskey 1960 A, 295; Berbati, 159; Lefkandi, 9 (Phase 2).

54. Korakou, 15; Lefkandi, 9-10 (Phase 3 onwards).

55. M.S.F. Hood, "The Early and Middle Minoan Periods at Knossos", in Mycenaean Seminar (8th December, 1965), 324, and personal information from Mr. Hood.

56. Korakou, 17-18, and personal observation.

at Phylakopi.⁵⁷ Even the late fine wares do not seem to have been generally wheelmade, although certain examples and classes have been described as such.⁵⁸ This is as true in the Argolid as in the more provincial areas of MH Greece: many of the vases in Circle A seem to have been handmade.⁵⁹ This no doubt helps to account for the popularity of the Grey Minyan vases, which could be relatively easily produced and were well-made: it also suggests that the potter's wheel was not particularly common on the mainland, and that its users were rather conservatively minded. These points will be of considerable relevance when the rise of Mycenaean pottery is discussed.

The chronology of the phases of MH pottery must be based on MM chronology, and fortunately recent finds have been very helpful in this respect. Caskey has stated that no MM IA was certainly found below the first stratum of Lerna V, but that MM I and apparent imitations were found in the earliest MH stratum:⁶⁰ this presumably supersedes earlier comment on the position of a certain MM IA cup.⁶¹ A vase from a rich tomb of the Early Minyan period has also been derived from the

57. Korakou, 19; cf. Phylakopi I, 94-5.

58. Korakou, 24 (late Matt-Painted), 28 (bichrome ware), 32 (light-on-dark); SG, Pl. 173:954.

59. SG, Pls. 149:161-2, 168:198, 170:222, 171, 172:858, 173:953, 174:200, 175:955, 956, are all so described.

60. Caskey 1960 A, 299; cf. PM IV, 83, fig. 51:15, 22.

61. Caskey 1956, 160, and Pl. 43:c.

MM IA tradition.⁶² A grooved Grey Minyan bowl was found in a late MM IA level at Knossos:⁶³ since it was not wheelmade, it is most likely to be late EH III or Early Minyan. All this evidence suggests that the MH period began during MM IA. Imports of Grey Minyan to Phylakopi belong mostly to the Angular Minyan phase, one piece being possibly earlier:⁶⁴ they were found in context with MM imports, nearly all MM IB-IIA. This synchronism is supported by the finds from grave J4 at Lerna:⁶⁵ the grave had been used twice, but the remains of an MM IIA holemouth jar found in it almost certainly went with the earlier burial, which was provided with a dark-slipped kantharos on a low stem and a fine Matt-Painted kantharos, both fairly advanced types of the Angular Minyan phase. That Grey Minyan types survived very late is shown by the appearance of a kantharos-sherd in a MM IIIB context at Knossos and by material from similar or even later contexts at Aghia Irini on Kea.⁶⁶ The MM influence in shapes and decoration on the Late Phase wares seems to date from after the acme of the 'Kamares' style. Thus we may suggest that Early Minyan started during MM IA, Angular Minyan in MM IB or IIA, and the Late Phase certainly after MM IIA, without making the synchronism of Minoan and Helladic phases very precise (see FIG.2 for suggested chronology).

62. Prehistoric Phocis, 256 and 259, fig. 6, which has been compared to PM IV, 82, fig. 50:19.

63. Hood, op.cit. (supra, note 55).

64. Phylakopi II, 16-18; Pl. 14:52 looks like an Early Minyan bowl.

65. Caskey 1957, 154, Pl. 43:a-c.

66. PM II, 309; Caskey 1966 C, Pl. 86:e.

(4) The History of Local Development

(i) The Argolid-Corinthia (See MAP 1).

I have suggested above that the Argolid-Corinthia was one of the main centres of EH III culture, and that its influence was dominant in the formation and spread of MH. The number of identifiable MH settlements is large, including nearly all those that had been settled in EH and probably one or two new ones.¹ Material that is certainly early was also common: the typical Early Mycenaean rounded bowl has been found at Lerna, Argos, Tiryns, Asine, Berbati, Zygouries, Gonia and Korakou.² Of these sites, only Argos has not produced clear evidence of EH III settlement, although it was certainly settled in EH II, and a few sherds have been called 'EB III'.³ Lerna alone has been excavated sufficiently to give some idea of the appearance of an MH settlement, but even this may be deceptive, for it is clear that Lerna was a site of some importance. But its continuous sequence of strata does allow deductions to be drawn about the history of the period, that cannot be drawn from elsewhere.

Four or five major strata have been distinguished at Lerna,⁴ covering most of the first three phases. The sequence in House D shows

1. Mycenaean Gazetteer, 13-37.

2. Supra, (3) The MH Pottery Sequence, note 8; Mycenae and Tiryns, 16-17; Korakou, 16; Zygouries, 126.

3. BCH Chronique 78 (1954), 175-6; 83 (1959), 758; Argos: Deiras, 113-5.

4. Caskey 1966 B, 11: cf. Caskey 1955, 28-9, 1957, 146-7, for detailed considerations of the stratigraphy.

how gradual the development was.⁵ The original floor had only Lerna IV types, that is, late EH III; a bothros associated with the second period of occupation contained a Matt-Painted jug, Grey Minyan jar and coarse stemmed cup; an Argive Minyan bowl was found on the following floor. This would suggest that the Early Minyan phase was short at Lerna, but I have already noted the difficulty of distinguishing late EH III from Early Minyan.⁶ Elsewhere, the contents of a substantial complex, centred on House 98A,⁷ belonged to the Early Minyan phase, and provided a complete range of the pottery: a notable feature was the presence of many fragments of storage-jars in different wares. The early Angular Minyan phase is represented by a group from Room AH, including a heavy Grey Minyan bowl, 3 building levels above the original level of Houses D and 98A;⁸ a later phase, with ring-stemmed goblets, was found in the last occupation of House M, which succeeded House D, and in the equivalent stratum 4 in Trench DE, another 3 strata above Room AH.⁹ The material from above this stage was fragmentary, and graves were common. These groups show clearly that the coated 'Argive Minyan' wares continued as an alternative to Grey Minyan, that the light ware decorated in lustrous dark paint increased

5. Caskey 1954, 16; 1955, 31-2; 1960 A, 298.

6. Supra, (2) The EH III Background, note 21.

7. Caskey 1956, 159-60; 1957, 149-50.

8. Caskey 1954, 10.

9. Caskey 1954, 15; 1957, 146.

in quantity during the period, and that already in the early Angular Minyan phase a polychrome ware, with decoration in dull white and purple on a glossy dark coat, had appeared. This last ware may belong to a tradition of MM imitations, which seems to have started at the beginning of MH and continued to the late graves:¹⁰ but the glossy ground differs from the dull ground of MM. There was no trace of Yellow Minyan and little of fine Matt-Painted types: even the relatively early fine Matt-Painted kantharos seems to have appeared only in graves.¹¹ This suggests that the strata containing material of the Angular Minyan phase, numerous though they are, do not cover the latest part of that phase. The diversity of wares characteristic of all stages at Lerna was further enriched by imports. The evidence for these is best in the earliest phases: MM IA, Cycladic, and, in House 98A, a class of incised flasks, that have been compared to examples of the Balkan Bubanj culture were found.¹² MM and Cycladic vases continued to appear, most often in graves.¹³

The range of small finds is not particularly remarkable; it included the usual clay spindle-whorls and spools, bone and stone implements. Bronzes included two daggers and a chisel¹⁴ (see FIG. 15), a pin with a

10. Caskey 1960 A, 299.

11. E.g. Caskey 1957, Pl. 43:d, f.

12. Caskey 1960 A, 299.

13. Caskey 1954, 19, pl. 8:e; 1956, 159, Pl. 43:a; 1957, 152, 154, Pl. 43:c.

14. Caskey 1957, 151, Pl. 42:c.

pierced bulb head surmounted by a bird¹⁵ (see FIG. 15), and a razor-like blade:¹⁶ the pin has a parallel at Mallia, surmounted by a flower.¹⁷ Obsidian does not seem to have been as common as in EH. Other finds of interest were an incised terracotta double-axe,¹⁸ an amulet of green stone in the shape of a forearm,¹⁹ and a great number of coarse clay beads.²⁰ All these finds belonged to contexts of fairly advanced date: graves assignable to the Late Phase contained a few 'glass' and carnelian beads, bronze pins and earrings, seashells, and clay and bone objects.²¹ (The 'glass' beads will be discussed with others from Greece in (5) The MH World). The beads and stone amulet were almost certainly imported, and the daggers were clearly related to Aegean types;²² they support the picture suggested by the pottery, of continuous contact on a small scale with the Aegean.

The settlement itself shows little change in architectural traditions

15. Caskey 1957, 148, Pl. 42:b.

16. Caskey 1957, 154.

17. P. Demargne, Fouilles exécutées à Mallia: Exploration des Nécropoles (1921-1933) (1945), Pl. 22:561.

18. Caskey 1957, 146, fig. 2 on 147.

19. Caskey 1955, 36.

20. Caskey 1955, 32.

21. See Appendix 1.

22. K.A. Branigan, Copper and Bronze Working in Early Bronze Age Crete (1968), 14-5, 17 (Types VII and XIII).

from EH III.²³ Houses were still predominantly of the megaron-type, often apsidal at the back, and set in close rows of differing orientation.²⁴ They sometimes contained features such as a clay bench, stone base for a wooden column, fixed hearths, clay bins or pithoi set in the floor, and bothroi sunk below it. Houses might be of considerable size, with well-constructed foundations: in the early phases, 'potato-masonry', using elongated rounded stones, was common.²⁵ Pebble-paved streets, generally narrow, ran between the houses.²⁶ The most interesting architectural features were some apparently industrial installations in one area, kilns or ovens and a foundry,²⁷ near which a clay object plausibly interpreted as a crucible was found, and the unique complex of buildings centred on House 98A. This was an apsidal megaron, built above a series of EH III megara;²⁸ walls to the north of it almost enclosed a quadrilateral compound against the house, within which separate rooms, apparently a kitchen and storeroom, were constructed²⁹ (See FIG. 13 for plan). The megaron was smaller than its EH III predecessors, being less than 11 metres long and some 4 wide, but

23. Caskey 1954, 14-16; 1955, 31; 1956, 158-60; 1957, 148-50.

24. Caskey 1956, 159.

25. Caskey 1955, 29, Pl. 13:c.

26. Caskey 1954, 9-10; 1955, 28-9.

27. Caskey 1956, 158-9.

28. Caskey 1966 B *passim*.

29. Caskey 1957, 149, fig. 4, and *supra*, note 7.

clearly most domestic activities were removed to the compound, which was about 16 metres long by 7.5 wide. In addition to the storeroom, one room of the megaron contained a row of storage-bins. A gravel street ran through the compound. Such a complex is without parallel from MH sites so far published: taking into consideration the quantities of storage-jars, pithoi and bins found, and the unique presence of foreign incised flasks, we may suspect that this was the residence of a rich, even a ruling family.

Graves appeared in numbers for the first time at Lerna during the MH period.³⁰ These might be dug under the houses or in the spaces between them: sometimes an area seems to have been reserved for them.³¹ In general, adults' graves do not seem to have been placed actually beneath house-floors, but this was a common practice with those of children, particularly very young ones. The earliest graves were usually simple rectangular or oval pits, cut in the earth; some children were buried in or under fragments of pithoi. In later phases the pits were lined and roofed with slabs, ideally one a side with a fifth for the roof: they might also be lined with mud-bricks or walled with slabs or stones. Late examples often had a pebble-strewn floor. The bodies were buried lying in a contracted position, originally with the knees drawn up almost to the chin; later graves were larger and the knees were drawn up less. Graves most often contained a single burial,

30. Caskey 1954, 10-11, 13-14, 19; 1955, 28; 1956, 155-8; 1957, 148, 152.

31. E.g. Caskey 1957, 149: Area BE, level 3.

but sometimes there were more: one from the level above the House 98A complex contained five, four adults and a child.³² Grave-goods were rare, generally consisting of pottery: some graves had Minoan or Cycladic vases. Three graves among those of the Late Phase, the two 'shaft graves' and BC.3, were monumental in size and finely walled, but they had been emptied of their goods apart from some pottery.³³ Some very late graves, covering the transition to LH I, have been found near the site.³⁴ Similar graves to those of Lerna have been found in most other parts of the Greek mainland, and the same sequence has been observed: pithos-burials tend to be early, simple inhumations to precede slab-built cists, and graves generally to become larger and richer as the period proceeds.

The remains from Lerna show that even a site of its obvious size and importance was not particularly rich during the greater part of the MH period, although it was clearly in touch with the Aegean world. Discoveries elsewhere in the Argolid-Corinthia provide similar evidence. Argos seems to have been a considerable centre of population from early in the MH period. The earliest material, of Early and Decorated Minyan date, was found in strata in the Deiras, the slope between Argos's two citadels, the Aspis and the Larisa:³⁵ material of the Decorated Minyan

32. Caskey 1957, 149: Grave BE.30.

33. Caskey 1955, 32-4, 1956, 155-8.

34. I. Papachristodoulou, in Deltion 22 (1967) B, 182.

35. Argos: Deiras, 136.

phase has also been found on the Aspis, in the South Quarter of the later town and behind the Larisa.³⁶ The later phases are not well represented: the appearance of the kantharos in Grey Minyan in the Deiras deposits heralds the arrival of the Angular Minyan phase,³⁷ to which a few pieces from the Aspis and a burial in the Deiras certainly belong.³⁸ Some graves and sherds may be assigned to the Late Phase.³⁹ Material from other parts of the town, including the Larisa itself, is MH but not closely definable.⁴⁰ It is more likely that these sites formed a series of closely connected villages than a really large town; later in the period, the area of settlement seems to have contracted and there may even have been a drop in the population. In some areas, as at Lerna, abandoned settlement-areas seem to have been used as cemeteries.⁴¹

The only really good evidence for architecture comes from the Aspis, where two phases of houses and two possible fortification walls were

36. Argos: Aspis I, II; BCH Chronique 78 (1954), 176-7, fig. 33; 91 (1967), 820, figs. 11-13.

37. Argos: Aspis I, 17, and Argos: Deiras, 136 (phase 3).

38. Argos: Aspis I, 17, note 1, 18, fig. 19, 29, figs. 50, 52-3; Argos: Deiras, 19-20.

39. Archaeology 9 (1956), 169, fig. 5; BCH Chronique 91 (1967), 830, fig. 32, 92 (1968), 1037, fig. 31.

40. The Larisa: W. Vollgraff, "Arx Argorum", in Mnemosyne 56 (1928), 323-5; South Quarter: BCH Chronique 79 (1955), 312-4; 80 (1956), 370, 374-6; 81 (1957), 678; Sondage 67: BCH Chronique 83 (1959), 755; Sondage d'Urgence 74: BCH Chronique 91 (1967), 808; Sondage d'Urgence 85, BCH Chronique 92 (1968), 1040.

41. P. Courbin, "Discoveries at Ancient Argos", in Archaeology 9 (1956), 168.

uncovered.⁴² The date of these has usually been taken to be MH, but is not in fact clear, for Mycenaean and even later material have certainly been found.⁴³ The houses are not of megaron-type, but long and rectangular with more than one cross-wall and sometimes joined together by a wall: similar houses of MH date have been found at Asea.⁴⁴ If these are MH, as seems likely from the great quantity of MH pottery found, then at least one of the walls should be of the same date, since the later phase of houses seems to have been built over it.⁴⁵ The wall is unremarkable, being built of small stones, without bastions or angles: possibly it is a terrace-wall, like another "MH fortification-wall" from Mycenae.⁴⁶ It is not impossible, however, that it was felt necessary to fortify the easily approachable Aspis, which was probably the citadel of Argos in the Bronze Age. The second wall, enclosing a much larger area, is in 'Cyclopean' style and may have been Mycenaean. The small finds from the Aspis include some of certainly or probably post-MH date, but a curved bronze knife and a quantity of obsidian blades and arrowheads are likely to be MH.⁴⁷

The graves were mostly of the normal types, cists, inhumations and

42. Argos: Aspis II.

43. Mycenaean: BM Cat. I 1, A 751, 782, 791:21 797:1, 1041, 1044-5; later: Argos: Aspis I, 37, figs. 63-5.

44. Asea, 16-19, figs. 13, 15, 17-18, 21-2.

45. Argos: Aspis II, Pl. 5.

46. G.E. Mylonas, Mycenae and the Mycenaean Age (1966), 15-16.

47. Argos: Aspis I, 39-40, fig. 70 (knife).

pithos-burials, occasionally containing gifts of pottery, and were found both under houses and in small groups outside them, as well as outside the settled area.⁴⁸ But one, T.301, is of considerable importance, for it is a clear case of cremation, the only known example of MH date.⁴⁹ It consisted of a rectangular clay-lined trench with post-holes in each corner, above which a wooden frame was constructed: the corpse was apparently laid on this, the framework was fired and collapsed into the trench, which was then partially filled with earth. A fine Matt-Painted kantharos of the Late Phase was set on the filling. This cremation antedates the next known in Greece, from Tragana,⁵⁰ by some three hundred years: it may be roughly contemporary with the Anatolian cremation-cemetery at Ilıca, between Ankara and Gordion, which is probably of seventeenth century B.C. date,⁵¹ but the method used is entirely different. It is not clear whether the posts of the Argos grave formed part of the structure to be burnt, or were intended to strengthen the sides of the grave: if the latter, Graves Beta and Zeta of Grave Circle B at Mycenae are possible parallels.⁵² The reasons for the appearance of this isolated cremation at Argos are beyond speculation at

48. BCH Chronique 78, (1954), 175-7; 79 (1955), 312-4; 80 (1956), 376; 81 (1957), 678; 91 (1967), 820-21, 826.

49. BCH Chronique 92 (1968), 1038-9.

50. S. Marinatos, in Praktika 1955, 252-3.

51. W. Orthmann, Das Gräberfeld bei Ilıca (1967), reviewed by M.J. Mellink in AJA 73 (1969), 80-1.

52. J. Papadimitriou, in Praktika 1952, 437, 464.

present.

At Asine, remains included an Early Minyan house,⁵³ long and rectangular but not obviously in the megaron tradition (see FIG. 13 for plan), and pottery of the middle phases, including probable MM and Cycladic imports.⁵⁴ Intramural burial was extremely common,⁵⁵ but burial-gifts were rare, and usually confined to pottery: an early woman's grave had two bronze earrings and a bone pin as well as a vase.⁵⁶ Certainly to be assigned to the Late Phase are houses of extremely complex plan, with many interconnected rooms⁵⁷ (see FIG. 13 for plan of one): in House B, the upper layer contained a group of late vases, including a fine light-on-dark vase with floral decoration,⁵⁸ and a child's grave, with fine late vases, was dug into one wall.⁵⁹ Another grave, found below the floor of House E, contained bronze beads.⁶⁰ A grave probably belonging to the Angular Minyan phase, in another area, contained a knife, described as silver-plated, and an obsidian arrowhead,

53. Asine, 263-5.

54. Asine, 261-3, fig. 183:15-19; 278, some on fig. 192; 290, fig. 199:23; 293, fig. 202.

55. Asine, 116-28, lists 106 graves.

56. Asine, 156.

57. Asine, 68-74.

58. Asine, 284-7.

59. Asine, 117: T. MH 18.

60. Asine, 116: T. MH 4.

as well as two vases:⁶¹ the knife might be related technologically to the Cretan "Sheffield-plated" dagger recently discussed.⁶² A spearhead, found near another grave, belongs to a type well-known in northern Greece, but seldom found so far south.⁶³ A very fine incised bone plaque, found in what is described as a very late MH stratum, has been thought MH,⁶⁴ but it is so closely related in style to pieces from Kakovatos⁶⁵ that I suspect it is Early Mycenaean. The evidence of the graves and the late houses suggests that this site was prosperous and important at the end of the MH period.

At Berbati, MH remains cover the whole period. I have already noted transitional or Early Minyan remains.⁶⁶ Unpublished pottery includes a group of Matt-Painted jugs, of Early or Decorated Minyan date: the vase used for a pithos-burial, a fine Matt-Painted barrel-jar, was closed by a Decorated Minyan bowl.⁶⁷ Only sherds represent the later MH phases on the site: but groups of graves have been found in more than one area.⁶⁸ Most were simple contracted inhumations, some of which

61. Asine, 258: T. MH 107; vases on fig. 186, on 268.

62. J.A. Charles, "The first Sheffield Plate", in Antiquity 42 (1968), 278-85.

63. Asine, 258; near T. MH 58.

64. Asine, 256-7.

65. AthMitt 34 (1909), 285, figs. 7-8, 286, fig.9.

66. Supra, (2) The EH III Background, 49, notes 20-21.

67. Berbati, 125-6.

68. Berbati, 93; U. Jantzen, in AA 53 (1938), 554; E. Vanderpool, "News Letter from Greece", in AJA 58 (1954), 234.

contained interesting grave-goods, a bronze dagger, eleven obsidian arrowheads, and five fine vases of the Late Phase.⁶⁹ One grave was of unusual type and has been called a "shaft grave".⁷⁰ In it, the body of a man was laid on a pebble floor, having as goods a dagger and five vases of the Late Phase; the tomb was covered by a roof made up of apparently fired earth between two thin layers of clay. This certainly suggests an unusual form of roof, but there were no traces of wooden beams or of the ledge upon which these would rest: it does not seem, then, that the structural features of this grave were like those of the Shaft Graves of Mycenae. Both of the daggers found were apparently flat and broad-bladed, a common late type probably deriving from Crete.⁷¹

The remains from other habitation-sites are much less informative. Decorated Minyan pieces have been found at Mycenae, Prosymna, Dendra, Zygouries, Korakou and Gonia;⁷² the wide spread of Grey Minyan belongs to the Angular Minyan phase, if not earlier. A fine apsidal megaron of this date was found at Korakou, built over the remains of a house of odd plan, apparently rectangular with two oblique partitions, probably of

69. These vases are on show in Nafplion Museum.

70. Å. Åkerström, "A Mycenaean Potter's Factory at Berbati near Mycenae", in First Mycenological Congress I, 48-9. The vases are on show in Nafplion Museum.

71. I owe this information to Professor Åkerström.

72. A.J.B. Wace, in BSA 45 (1950), 210, 217-8; Prosymna I, 378-9; G. Walberg, "Finds from Excavations in the Acropolis of Midea, 1939", in OpusAth 7 (1967), 170-71, Pl. 4:a; Zygouries, 41, 126; Korakou, 17, fig. 23; Gonia, 76.

the same period.⁷³ Houses at Tsoungiza, near Nemea, with Grey Minyan and Matt-Painted pottery, probably also date to this period.⁷⁴ At Mycenae, remains of MH habitation are widely scattered: besides the acropolis and immediately below it, the Perseia Fountain and Grave Circle B areas, the Kalkani hill and probably the Panaghia ridge have produced evidence for habitation:⁷⁵ of these Kalkani hill seems to have had a separate settlement already in EH. Burials, mostly of children, were made in shallow rock-cut graves in the Prehistoric Cemetery area under the acropolis: some were in jars.⁷⁶ The situation here may have been similar to that suggested for Argos, a network of settlements centring on an acropolis.

Evidence for the Late Phase is abundant in the Argolid-Corinthia area. Especially noteworthy are the great quantities of late Matt-Painted found at Korakou,⁷⁷ some graves at Zygyouries,⁷⁸ and the cemeteries of Mycenae, Corinth and Prosymna.⁷⁹ These cemeteries

73. Korakou, 76-9, fig. 110.

74. J.P. Harland, in AJA 32 (1928), 63.

75. The Panaghia ridge: BSA (Mycenae 25), 291, 320; Kalkani hill and the opposite bank: Chamber Tombs, 29, 44; the Perseia Fountain House Area: M.S.F. Hood, in BSA 48 (1953), 24-5; the area of Circle B; J. Papadimitriou, in ILN, March 6th, 1954, 365.

76. A.J.B. Wace, preliminary reports of the excavation of the Prehistoric Cemetery in BSA 45 (1950), 204-23; 48 (1953), 7-9; 49 (1954), 232-3; 50 (1955), 190-93; 51 (1956), 106-7.

77. Korakou, 24-30.

78. Zygyouries, 39-40, 55-7.

79. Supra, (3) The MH Pottery Sequence, note 39.

consisted of small groups of graves, widely spread at Prosymna, that seem certainly extramural: Grave 22 at Zygouries may be the survivor of such a group. It is likely that these groups were attached to small settlements whose remains have not survived, but which centred on a main acropolis in the same way as we have seen reason to suspect for Mycenae and Argos. Most of the graves in Circle B at Mycenae belong to this period, but will be discussed in the next chapter.

The typical grave-form of this period is a slab-roofed oval or rectangular cist, cut in earth, stereo or rock, sometimes lined with small stones or provided with a pebble-floor. Single burial was the rule at Corinth and Prosymna, but Grave 22 at Zygouries contained three layers of burials, and reuse of graves occurred at both Mycenae and Lerna.⁸⁰ Many of these graves contained fine plain or Matt-Painted vases: other goods were beads of 'glass', various stones or bronze, and less often bronze pins, wire ringlets and loops.⁸¹ One grave each at Corinth and Prosymna contained a dagger; that from Prosymna had an ivory handle, and was accompanied by a pair of tweezers (see FIG. 15). Two graves at Corinth were comparatively rich, one containing a silver armlet and an assortment of silver and bronze jewellery, the other a gold head-band and silver armlet as well as a range of beads. The head-band (see FIG. 15) was simply decorated in punctuated and repoussé style by dot-rosettes and dot-surrounded bosses: it is small, but recalls in

80. Zygouries, 55-7; supra, note 32, also Caskey 1956, 155; 1957, 143-4; Mycenae, Grave Circle B, see below, Ch. III.

81. See Appendix ...

shape and size the plain examples from the Aegina Treasure as well as the larger 'diadems' of the Shaft Graves, of which it is a clear forerunner in its decoration.⁸² The armlet had remains of similar decoration. These objects, with the beads and daggers, show clear foreign connections: the Prosymna dagger has a fairly close parallel from Mallia.⁸³ All these objects may have been imported: materials such as the 'glass' and carnelian of the beads must have been, but the dagger-blades and metal objects could mostly be of local manufacture, since they did not require knowledge of very advanced techniques. None of these comparatively well-provided graves is set off by size and construction from the rest: only at Lerna have graves of monumental size been found.

These tombs give evidence of increasing prosperity, of a probably lively trade in small trinkets and precious materials, and of a growing interest in weapons. The widespread connections of the weapons, and the appearance of the Argos cremation, suggest that there was exchange of ideas and techniques as well: the adoption of various foreign vase-shapes and the appearance of floral or animal styles in late Matt-Painted is a parallel development. Even the late Asine houses may derive ultimately from Cycladic or Cretan types: they certainly have no obvious connection with local tradition. It should be remembered that the period

82. R.A. Higgins, 'The Aegina Treasure Reconsidered', in BSA 52 (1957), 49, Pl. 13:a; SG, Pl. 72:219, is perhaps one of the closest to the Corinth head-band.

83. J. Deshayes and A. Desenne, Fouilles exécutées à Mallia: Exploration des Maisons et Quartiers d'Habitation II (1959), Pl.20:5.

of this foreign influence is unlikely to have lasted more than a century, c. 1650-1550 B.C.: such influence is hard to document earlier, despite the appearance of imported pottery. Thus for a very long period, maybe two or three centuries, the local MH culture was dependent on its own resources, which may well explain the comparative poverty and lack of enterprise shown. This was certainly not due to a small population: the evidence for subsidiary settlements at several sites and the number of graves known suggest that the population was large at this period. The combination of a large population with a more enterprising spirit and a growth of prosperity provides the background against which we must consider the emergence of the Shaft Grave complex.

(ii) S. Arcadia and Laconia (See MAP 2).

The situation in the rest of the eastern Peloponnese is much less easy to define. In south Arcadia, Asea has been excavated, in Laconia, Aghios Stephanos: some MH remains have also been found in excavations at Amyklae and Geraki. Otherwise, there is only the evidence of the surface-surveys.¹ Habitation in Laconia seems to have centred in the Eurotas valley and coastal plain, spreading east into the foothills of Parnon: virtually nothing is known of Arcadia. EH II was well represented in this area, but the only certain evidence of EH III is the appearance of sherds at Asea.

The remains from the site of Asea are unspectacular.² Two strata of houses belong to the earlier MH phases: they are remarkable for their plans, which are generally long and rectangular, with one or more partitions, often obliquely set. There seems to have been no order in their positioning. A house of the second phase, with extremely thick walls built partly of worked stone, had an apsidal plan, and was probably a megaron,³ but this type was not otherwise represented. There were many burials on the site, mostly earth-cut inhumations, but including a few slab-lined cists and pithos-burials; several held adults, but only two were provided with a burial-gift, which in each case was a coarse jar. The pottery included Grey and Argive Minyan, much

1. Prehistoric Laconia I and II.

2. Asea, 12-20 (houses), 21-6, 29-30 (tombs), 90-110 (pottery), 117-31 (small finds).

3. Asea, 19, fig. 21 (House N).

incised coarse, good early Matt-Painted, some probable lustrous-decorated,⁴ and a little decorated in white on a lustrous red coat, a ware also found at Asine.⁵ Small finds included three clay seals of poor quality, some 'arrow-polishers', worked pieces of boar's tusk, and a bone pommel: these were not necessarily MH, but 'arrow-polishers' are fairly common in MH or probably MH contexts,⁶ and the working of boar's tusk seems to have been a MH industry.⁷ Although some Mycenaean sherds were found on the site, there was no MH of the Angular Minyan or Late phases, and Asea may have been deserted during these periods. It never seems to have been more than a rather poor village, but its pottery suggests that it was in close touch with the Argolid, and it may well have been a stage on the land-route to Laconia and Messenia.

The excavations at Aghios Stephanos⁸ produced EH II burials and pottery, and a class of ware possibly attributable to EH III. No MH structures were found, but burials were common, including inhumations, built cists and one pithos burial, and there was a considerable amount

4. Asea, 101, fig. 99, especially h-j.

5. Asea, 101-2, fig. 100.

6. H.-G. Buchholz, "Der Pfeilglätter aus dem VI. Schachtgrab von Mykene und die helladischen Pfeilspitzen", in JdI 77 (1962), 16-17.

7. Eutresis, 54; Eleusis, 55-6.

8. Preliminary reports by Lord William Taylour in ArchRep 1959-60, 9-10, 1960-61, 32-3, 1963-4, 9-10. I have been able to see the material in Sparta Museum through his courtesy and that of Mr. A. Delivorrias, acting Ephor of Laconia.

of pottery. The most important burial was of fairly advanced MH date, containing the body of a woman with fine grave-goods.⁹ These were a long bronze pin (see FIG.15), bronze earrings, finger-ring and bracelet, a necklace of carnelian beads, and five vases, including an incised pyxis that may well be a Cycladic import. Other burials likely to be MH were provided, in one case, with an oddly shaped vase, possibly a lamp,¹⁰ and in another with 35 obsidian blades, a bone pin and flint scraper. Pottery included Grey Minyan, imitations of Minyan in a local hard purple-grey ware, and coated 'Argive Minyan': the types were generally those of the Decorated Minyan phase, but one carinated bowl was found. Painted wares included Matt-Painted of early type, with bands and hatched triangles, some possible lustrous-decorated, and some coarsish white-on-dark. There were a number of imports, the most interesting of which were Cretan, a piece of 'barbotine' ware, pieces of two polychrome MM I-II vases, later polychrome light-on-dark and dark-on-light jars that might be MM III - LM IA, and a plain, strongly wheel-grooved Vapheio cup, a MM IIB-III type. This strong Cretan element seems to derive mainly from Crete itself rather than from the Cretan colony on Kythera, which does not seem to have produced barbotine or polychrome wares. A Cycladic element is possibly represented by the incised pyxis just noted, a beaked jug, and obsidian. This picture of trade with the Aegean is supported by finds from

9. The best discussion is by Lord William Taylour in Deltion 19 (1964) B, 146, with Pls. 147:a (vases), 148:a (goods).

10. Deltion 19 (1964) B, Pl. 147:b.

Pavlopetri,¹¹ a partly underwater site off the island of Elaphonisi, well down the eastern side of the Laconian Gulf. Here the remains of a town of uncertain date were found, with many intramural cist-burials that might be MH: the pottery included EH, and possibly EC, Argive Minyan and other MH, and probable pieces of MM III jars. At Kastri on Kythera, however, only a little Argive Minyan was found, and no other MH that was likely to come from Laconia:¹² two coarse pieces of red-decorated black-coated ware, from Skala in the Helos plain and Gangania near the east coast,¹³ may be MM III of the Kytheran type, but there is otherwise little evidence that the Laconians and Kytheriots were interested in one another.

The peculiar rarity of Angular Minyan and later Matt-Painted at Aghios Stephanos is mirrored in the sherd-material from other sites. Decorated Minyan is most frequently identifiable:¹⁴ two bowls with rounded profiles from Palaiopyrgi, near the Vapheio tholos in the central Laconian plain, may even be Early Minyan.¹⁵ The ring-stemmed goblet does not seem to have been found at all, but low-stemmed bowls in various wares do occur. Pieces of what appears to be the lustrous-

11. A. Harding, "A Town under Water from the Bronze Age", in ILN, 22nd February 1969, 22-3. I have discussed this material with Mr. Harding and Mr. G. Cadogan.
12. I owe this information to Mr. N. Coldstream.
13. Prehistoric Laconia I, 95: II, 39.
14. Prehistoric Laconia I, 101, fig. 16:5-7; E. Buschor, "Vom Amyklaion", in AthMitt 52 (1927), 4-5, figs. 1-4.
15. Prehistoric Laconia I, 80, fig. 6:10-11.

decorated ware of Lerna,¹⁶ with characteristic decoration of hatched triangles and use of added white, have been found at Amyklæ and Geraki.¹⁷ The same two sites have also produced fine loop-handled jars of the Late Phase,¹⁸ and at Geraki a slab-cist contained a fine long bronze pin with a curiously shaped head (see FIG. 15), as well as two late vases.¹⁹

The finds from Laconia present a rather peculiar picture. There is very little evidence for the period between EH II and the Decorated Minyan phase, by which time the MH culture seems to have become well-established. The rarity of Matt-Painted and virtual absence of true Angular Minyan types suggests that the local culture was not continuously in touch with the Argolid: at the same time, there is as much evidence for links with Crete and the Cyclades at Aghios Stephanos as at Lerna. The appearance of fine Late Phase vases, long bronze pins and carnelian beads indicates that the province was prosperous in the latest phase of MH. But very little is certainly known, and a few new finds might completely change the picture.

16. Supra, (3) The MH Pottery Sequence, 69 and note 14.

17. Buschor, op. cit. (supra, note 14), Pl. I:1 (opposite p. 8); A.J.B. Wace, "Early Pottery from Geraki", in BSA 16 (1909-10), 73, fig. 2:f.

18. Buschor, op. cit. (supra, note 14), Pl. 1:4-5 (opposite p.9); Wace, op. cit. (supra, note 16), 74, fig. 3.

19. Wace, op. cit. (supra, note 16), 74, fig. 4.

(iii) The South-West Peloponnese (See MAP 3)

At present it is most convenient to consider finds from the huge area bounded by the river Alpheios and the Taygetos mountain-range together. Despite the obvious importance of this area in the Early Mycenaean period, its pre-Mycenaean and more particularly its MH history remains extremely obscure. Many sites have been identified by surface-surveys,¹ but there have been very few excavations, and the evidence provided by these so far has not proved very helpful. The early discoveries at Olympia raise so many problems that I shall consider them separately at the end of the section: the site of Malthi, the only other to have produced substantial architectural remains, needs reconsideration.

The excavator of Malthi divided the pre-Mycenaean strata into Neolithic, EH and MH,² but it has been suggested more recently³ that the remains are nearly all of MH date, and I accept this conclusion. A stone figurine, some arrowheads, and possibly some of the pottery, are pre-MH:⁴ but the 'Neolithic Proto-Minyan', 'EH Patterned Ware' and 'Adriatic Ware' have perfectly good parallels with MH wares.⁵ It

1. Prehistoric Messenia I, II, III.

2. Malthi, especially 398-404.

3. Prehistoric Messenia III, 141.

4. Malthi, Pl. 1:2 (figurine); 357, Pl. 27: numbered 1-5, 8, 12 (arrowheads); 249, fig. 57, 273-4 (possibly pre-MH pottery).

5. Malthi, 245, fig. 52 ('Neolithic Proto-Minyan'), 261, fig. 60 ('Adriatic'), 281-2 ('EH Patterned').

remains impossible to link the pottery closely with the building-levels: the only certainty is that after several phases of scattered houses, including rectangular, apsidal and even oval types, an integrated fortified village was constructed on top of the hill, probably late in the MH period. The reasons for its construction must have been extremely compelling, for Malthi is a naturally strong site, rising high above the plain. But it may be argued that the intention was to get absolutely secure control of the route from the central Messenian plain to the west coast, one of the main land-routes of Messenia to the present day; the route down into the central plain is also not far away. Later evidence suggests that Malthi was the seat of one of the early Messenian principalities, and we may equate the foundation of the fortress with that of the principality. To judge from the appearance of similar fortified sites and citadel-based principalities elsewhere in western Messenia, this is unlikely to have happened before the end of MH; but this is to argue from negative evidence, since so little is known of the pre-Mycenaean phases at these sites.⁶

The fortress consisted of a simple circuit-wall with several entrances and occasional buttresses, against the inside of which small rooms had been built, sometimes with further rooms built onto them. In the centre of the village a large group of rooms, apparently supported by a terrace-wall and partly separated from the rest of the citadel by open spaces, was identified by the excavator as the ruler's residence.

6. I am anticipating here arguments in Ch. IV.

This plan has no real parallel at other MH sites except on Aegina, where the wall assigned to the MH period has rooms built against it in a similar way:⁷ the EB fortress of Chalandriani on Syros has evidence of a similar network of interconnecting rooms stretching into the citadel from the wall.⁸ It is conceivable, then, that the source of inspiration for the construction of Malthi was the system of fortification developed in the Aegean in the Early Bronze Age.

Quite a number of graves were found on the citadel, earth-cut inhumations, slab- and stone-built cists and one pithos burial.⁹ These mostly contained children and were without offerings: such goods as were found, notably an ivory sword-pommel, crystal ball and glass bead,¹⁰ cannot be securely dated to MH, since no MH pottery was found with them. The only other small finds of interest were a number of stone 'arrow-polishers' and some flint and obsidian arrowheads.¹¹

The pottery included most of the classes familiar in the Argolid. Plain and incised coarse wares were commonest, including probable imitations of Minyan. Grey Minyan was rare, and may have been mainly imported:¹² some was handmade, probably of local origin. The

7. Aegina, 11, fig. 9.

8. Deltion 22 (1967) A, 56, Plan 2.

9. Malthi, 186-225.

10. Malthi, 198 (bead), 344 (ball), 361-2 (pommel).

11. Malthi, 353-4 (polishers), 357-8 (arrowheads).

12. Malthi, 296-7.

'Neolithic Proto-Minyan' seems to include types parallel to Early Minyan:¹³ Decorated Minyan is represented by coated Argive Minyan types with ridging and incised festoons,¹⁴ and Angular Minyan by kantharoi.¹⁵ No pieces of ring-stemmed goblets were found. The 'EH Patterned Ware' seems in fact to have been early Matt-Painted:¹⁶ lustrous-decorated ware with added white may also be identified.¹⁷ Some late Matt-Painted, also probably imported, was found.¹⁸ Thus, there seems to have been fairly constant contact with the eastern Peloponnese without really strong influence at any stage, a situation recalling that already described for Laconia.

Other material from Messenia fits the picture presented by Malthi. Excavations on Nisakouli, an island opposite Methone, have produced interesting results.¹⁹ Remains of two structures and of pithos-burials and inhumations were found. The pottery included an Argive Minyan bowl, pieces of Grey Minyan and Matt-Painted kantharoi, an early Matt-Painted jug, and a plain double-cup, and a few sherds of incised coarse

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13. Malthi, 245, fig. 52: nearly all the pieces shown belong to rounded bowls.
14. Malthi, Pls. 3:32-4, 18:3, 45; cf. Malthi, 245, fig. 52: third row, 11.
15. Malthi, Pl. 18:36, 46; cf. Malthi, 245, fig. 52: top row, 5, 11; third row, 8-9.
16. Malthi, Pl. 23: A 14-21.
17. Malthi, Pl. 23: D 1, 3, 6, 11.
18. Malthi, Pls. 4:22, 23: B 10, C passim.
19. A.C. Choremis, "Μ.Ε. βωμὸς εἰς "Νησεκούλι" Μεθώνης ", in AthAA 2 (1969), 10-14.

ware. Much of this material was associated with the second structure, a right angle made up of two walls 1.30 and 1.35 metres long: within the angle was a great heap of stones resting on very hard burnt earth, containing much pottery and burnt animal-bones. Since the animal-remains included deers' horns and boars' tusks, from animals unlikely to have been found among the island's fauna or to have been part of the normal diet of the population, and since the structure seems to have been found complete, it is difficult to resist the excavator's conclusion that this was an altar. The remains of a house and of burials show that this was also a habitation-site. This is the first convincing evidence of a MH cult-area to have been found, and there is no real scope for speculation on the cult-practices involved: it seems likely that animals were brought to the island for sacrifice, but nothing more can be certainly stated. It is at present more important to note that the range of pottery represented agrees very well with that of Malthi.

The same may be said of sherd-material from the surveys, and deposits from excavations.²⁰ Incised coarse ware and early Matt-Painted were often found; true Grey Minyan was rare, but Argive Minyan and imitations, including carinated shapes, were found.²¹ Matt-Painted

20. C.W. Blegen, in AJA 70 (1966), 101, with Pl. 26: fig. 6 (some), considers material from Pylos; for other sites with good material, cf. Prehistoric Messenia I, 224 (Aghios Andreas), 232 (Aghios Demetrios), 235 (Koutsoveri), 237 (Kanalos), 241 (Traganes); II, 231 (Aghios Georghios).

21. Grey and Argive Minyan have been found at Pylos (Blegen, op.cit., supra, note 20), and Rizomylo. Cf. also Prehistoric Messenia I, 224 (Aghios Andreas), 232 (Aghios Demetrios), 238, fig. 8:K (Kyparissia); II, 233 (Aghios Elias).

sherds of late appearance have been found at some major sites.²² The best evidence for the local non-Argive nature of the culture, however, is provided by the few graves found and their contents.

There is now a considerable amount of evidence that the custom of tumulus-burial was prevalent in the western parts of Greece. In Messenia, many probable examples have been identified in the Pylos area:²³ some have been excavated at Pappoulia, Routsis and at Peristeria further north.²⁴ In Triphylia, examples have been excavated at Samikon and Makraysia, that were first used at the end of the MH period:²⁵ one of MH date has been reported from the Alpheios valley.²⁶ As I shall show below, examples have been found in Achaea and the Ionian Islands, and the custom persisted into Mycenaean times.

The earlier examples may be separated from the rest by a preference for pithos-burial, whereas later ones contained only cist-burials and inhumations. One tumulus excavated at Routsis contained pithoi; the example at Peristeria, which was remarkably large, being 16-20 metres in diameter, contained two burials in large pithoi under a burnt layer

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22. AJA 70 (1966), Pl. 26: fig. 6, third row from top, left (Pylos); Praktika 1960, Pl. 160n, bottom row but one, two on right; 1961, Pl. 132g, top row, centre (Peristeria).
 23. S. Marinatos, in Praktika 1954, 315; Prehistoric Messenia I, 256, with note 12.
 24. S. Marinatos, in Praktika 1953, 250 (Routsis), 1954, 311-5, 1955, 254-5 (Pappoulia), 1960, 206, 1964, 292-3 (Koukirikou, near Peristeria).
 25. Samikon; P. Themelis, "Σκαλλόου", in Deltion 23 (1968) A, 284-92.
 26. N. Yalouris, "Trouvailles mycéniennes et prémycéniennes de la Région du Sanctuaire d'Olympie", in First Mycenological Congress I, 178 (Mageira).

which spread all over the tumulus, and in which a large Grey Minyan vase was found. The best preserved example, at Pappoulia, was about 13 metres in diameter, and had a kerb-wall over two metres high (see FIG. 14 for plan). Several burials in extremely large pithoi were set into this wall, with the mouths facing outwards: the largest preserved pithos was 2.18 metres high. In the centre of the tumulus were found remains of other pithos-burials, a decorated jar that is probably early Matt-Painted,²⁷ and a horseshoe-shaped structure, built over a hollow in the rock, 12 cm. deep. The structure had its entrance walled off: in front of it, within a long narrow area bounded by stones, were many traces of fire and bone-fragments. Similar traces were found on a sort of altar near the structure's entrance. It seems probable that these are connected with rites performed on the occasion of the first burial. The tumulus was certainly a "family-tomb", containing the burials of both adults and children; there were no goods, but one of the adults appeared to have been shot by a poorly-made obsidian arrowhead. A cist-tomb, containing a single contracted skeleton, that was found near the tumulus, may be MH. If we may judge from the signs of religious rites, the users of the tumulus were people of some importance: the burnt layer in the Peristeria tumulus may be connected with similar rites, but no such traces have been reported from other tumuli.

Certainly late and containing important burials are the small tholos tomb at Koryphasion and a partly rock-cut, partly built grave at

27. Praktika 1954, 311-2, fig. 9.

Volimidia. The former had been thoroughly robbed, but contained remains of several vases, of vessels of silver and faience, and evidence of a burnt layer throughout.²⁸ The vases were most interesting: they included a ripple-decorated ewer that may be assigned to MM IIIB or LM IA, part of a jar of Early Mycenaean date, and six whole Matt-Painted vases. One of these was wheelmade, an ovoid jar with narrow neck and belly-handles, decorated simply with horizontal bands in semi-lustrous paint: there were fragments of others, and the type will be met again. The rest were handmade, including a double-cup, flaring bowl with internal handle, 2 basket-handled 'feeding-bottles' and a small four-handled jar (see FIG. 12 for shapes). The traces of decoration showed a simple style, using pendent festoons, multiple triangles and alternating groups of diagonal lines. It is conceivable that all this material belonged to one burial: in any event, this Matt-Painted pottery is stylistically the earliest to be reported from any tholos. The tomb itself will be considered in more detail in Ch. VI.

The other tomb, Kephalovryso T.1 at Volimidia, was constructed within a natural rock-hollow, a thick stone wall being built along it; it was roofed with slabs, possibly supported on beams, and was extremely large for a MH grave, measuring 3.60 by 1.25 metres.²⁹ Two fine sherds, one definitely of late Matt-Painted style, were found in the fill. The grave had been used for several burials: all but the last had been

28. C.W. Blegen, "An Early Tholos Tomb in Western Messenia", in Hesperia 23 (1954), 158-62.

29. S. Marinatos, in Praktika 1964, 86-9, with Pls. 88-91.

pushed to one side with their grave-goods, several vases and a bronze knife. The last burial was laid in the centre in a contracted position, surrounded by grave-gifts. These included some twenty vases, a bronze dagger and two knives, a group of forty-one flint arrowheads, many flint-flakes, and a probable whetstone and knapper. The pottery included examples of the double-cup, flaring bowl and feeding-bottle found in the Koryphasion tholos, also several spouted bowls, a pedestalled bowl with four miniature cups attached inside the rim, a Matt-Painted jug, Matt-Painted and plain kantharoi, a coarse jar and a small rounded cup. I believe that the last was a Cretan import: it has a coated interior³⁰ and is a shape that is very rare in mainland pottery. There are only traces of decoration outside, which cannot be used to date it closely. The bronzes are of well-known types; the dagger is broad and flat with three rivets across the base, the commonest type in MH Greece but perhaps ultimately Minoan, and two of the knives have a knob on the back behind the point, the characteristic of Sandars's Type 6b,³¹ which has been found in graves in Leukas and Epirus, and in the Drachmani tumulus in Phocis (see FIG. 15 for example). This assemblage of grave-goods suggests that their owner was a man of considerable importance, if poor in comparison to the people buried in Grave Circle B: he was probably a forerunner of the princes whose tholos-tombs and citadels appeared all over Messenia in the Mycenaean period.

30. This is easily seen through the glass in Chora Museum.

31. N.K. Sandars, "The Antiquity of the One-Edged Bronze Knife in the Aegean", in ProcPS 21 (1955), 183, 196.

I have left discussion of Olympia until last, for the remains present many problems. Quantities of EH-MH material have been reported from various parts of the site,³² but nothing has so far been published. The early discoveries have therefore to be considered in isolation.³³ In the north of the Altis, north and east of Pelopion mound, scattered remains of houses and graves were found, that have always been thought to be MH. However, the presence of a LH IIIC sherd on the floor of one house, of a later bronze statuette at floor-level in another, and of iron spearheads in associated levels, are embarrassing: they may be explained as the results of later disturbance, or as indicating the true date of the material, the end of the Bronze Age.³⁴ In view of the parallels of the material, I find it more likely that these are later intrusions.

The architectural remains belong to six or seven apsidal megara, only two of which have survived more or less intact: these have the peculiarity of widening from the entrance to the apse, where the walls are some 40 cm. further apart than at the entrance. The buildings are rather scattered, some facing north-east, others south or east. Three infant-burials in large jars were found in the same area, two

32. Prehistoric Messenia III, 128-9.

33. These are published by F. Weege, in "Einzelfunde von Olympia 1907-1909, I: Funde aus der Wohnhäuserschicht", in AthMitt 36 (1911), 163-85, and W. Dörpfeld in Alt-Olympia (1935) I, 73-96, II, Pl. 25, plans 17, 22.

34. Weege, op. cit. (supra, note 33), 176, fig. 20:a, 177, 180; a late date has been suggested to me by Mr. Sinclair Hood.

containing vases comparable to those from the houses. House 3 contained the majority of the finds, 5 pithoi, 16 vases and fragments of others, 11 small finds (stone tools and flakes and clay whorls), and provided the best range of the pottery. This included cups and high-necked jugs and jars in a finely incised polished red or brown ware, a decorated amphora with handles set on the shoulder, a rounded kantharos in fine blue-grey ware, very similar to Minyan, with incised spirals pendent from the handles, coarse and plain jugs and cups, an askoid jug and a coarse open jar with knob-decoration on the shoulder:³⁵ all vases were handmade. Similar vases were found in the other houses, and similar sherd-material in the same stratum; but no other painted vases were found. The stratum included two sherds that seem to be MH incised coarse, and one with stamped circles that may be Cycladic.³⁶ As well as blades and flakes of obsidian in House 3, two nuclei of obsidian were found in other houses.

While individual pieces of this assemblage may be paralleled easily enough, the whole group has no parallels elsewhere. For instance, the incised cups, with handles set below the rim, are most like an EH III shape, but have parallels in the Capo Graziano culture of Lipari.³⁷

35. Dörpfeld, op.cit. (supra, note 33), II, plan 22, shows nearly all of these.

36. Weege, op.cit. (supra, note 33), 174, fig. 18.

37. E.g. Eutresis, Pl. 9:4; cf. M. Cavalier, "Les Cultures préhistoriques des Iles Éoliennes et leur Rapport avec le Monde égéen", in BCH 84 (1960), fig. 19 (between 338-9), and 343 fig. 23.

Some of the jars have some fairly close parallels for their shape in Macedonian EB.³⁸ Pieces of blue-grey kantharoi with incised spirals have been found at Pelikata in mixed strata:³⁹ the shape may be found in Macedonia.⁴⁰ The coarse knob-decorated jar is most clearly of the EH III - MH type described above:⁴¹ an EB example from Macedonia may be noted.⁴² The plain cups and jugs have some parallels at Malthi, where one incised sherd of the Olympia type has been found.⁴³ The style of the incised decoration is most difficult to parallel: the Capo Graziano cups have a similar sort of decoration, but it seems that the Capo Graziano culture flourished mainly during the Early and Middle Mycenaean periods, and cannot have begun much before the end of MH, and it is unlikely that the Olympia finds should be so late.⁴⁴ The decorated jar is very worn; two pieces very probably part of it seem to show decoration of multiple zigzags, which is not a usual Matt-Painted motif on vase-shoulders. The decoration of a small jug from Gourzoumisi in Achaea,

38. Dörpfeld, op.cit. (supra, note 33), II, plan 22:1-2; cf. Prehistoric Macedonia, 186, nos. 268-70; 194, nos. 345-9.

39. Pelikata, 30-31.

40. Prehistoric Macedonia, e.g. 193, *passim*.

41. Dörpfeld, op.cit. (supra, note 33), II, plan 22:10; cf. e.g. Asine, 265, fig. 184:11, 283, fig. 194:5; Eutresis, 178, fig. 246:3.

42. Prehistoric Macedonia, Pl. 12:201.

43. Malthi, Pls. 16:103, 17:14, 43+4, 50, 20:27, 57; Pl. 3:23 (incised sherd).

44. Cavalier, op.cit. (supra, note 37), 335-6.

that has been called EH III, may be cited as a possible parallel.⁴⁵

The number of EB and Macedonian parallels may suggest an answer to the problem, that this assemblage is the equivalent of EH III in eastern Greece. The usual description of the decorated jar as 'Matt-Painted' need not matter, since it was so worn, nor need the ascription of the kantharoi found at Pelikata to MH, since the strata were so mixed.

Admittedly, the main features, handmade 'proto-MH' pottery, apsidal megara, and the burial of children in pithoi, might equally well support a date early in MH. But the virtual absence of the incised coarse ware, found so often in Messenia and even at the site of Pisa a short way east of Olympia,⁴⁶ suggests that, if MH, this material may only be placed at the very beginning of the period: for we have already seen⁴⁷ that this ware was well-established by the Decorated Minyan phase.

If one excludes Olympia, the remains from the south-west Peloponnese may be considered genuinely MH, having a strong provincial flavour. The prevalence of tumulus-burial links the area to the whole west Greek province, including Epirus, which does not seem to have been 'Helladic' at this period at all, to judge from its pottery. The appearance of Type 6b knives in Kephlovryso T.1 reinforces this connection: occasional Argive types of pottery, and one or two pieces that may be ascribed to Crete appear late in the period. Obsidian must

45. Praktika 1931, 72, fig. 3.

46. Dörpfeld, op.cit. (supra, note 33), II, Pl. 24.

47. Supra, cf. (v), ~~note 1;~~ (3) The MH Pottery Sequence, note 21.

have been traded overland from the eastern Peloponnese or brought direct by Cycladic traders. So far, Messenia appears to have been rather a poor province throughout the MH period: but it would be unwise to state this certainly, for such conclusions must usually be based largely on the contents of graves, which are very poorly represented in Messenia at this period. Certainly, its local princes can be shown to have been very prosperous early in the Mycenaean period: it may be, then, that appearances are at present deceptive.

(iv) North-West Greece (See MAP 4)

Under this heading I shall group the rare finds from Elis, Achaea, Aetolia, and the Ionian Islands. It is by no means certain that these form a single province, but at present finds in these areas have been so rare that they may be considered together. There is certain evidence of the EH II culture, and a few traces have been found of EH III.¹ The evidence for sites improves in MH, but they are still extremely rare.

Several sites have been identified in Elis, and there have been excavations at Chlemoutsi, near the probable site of later Cyllene.² This was an imposing acropolis, later the site of a mediaeval castle, which had considerable traces of MH and some of LH occupation. The evidence was confined to pottery, which in one area was found in a burnt level. The range of MH pottery was extremely interesting: there were a few pieces of genuine Grey Minyan, probably imported, one Yellow Minyan, one or two Matt-Painted, and one incised,³ but the bulk consisted of a ware that was clearly imitating Minyan, with angular shapes, offset rims and strap-handles.⁴ A Matt-Painted jar and some rounded goblet-profiles probably belong to the end of MH or even Early Mycenaean:⁵

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1. Supra, (2) The EH III Background, note 37 (Teikhos Dymaion, Gourzoumisa, Pelikata).
 2. H.S. Robinson, "Salvage Archaeology in Elis, 1967", in AthAA 1 (1968), 46-8; J. Servais, "Le site helladique de Khlémoutsi et l'Hyrminè homérique", in BCH 88 (1964), 9-50.
 3. Servais, op.cit. (supra, note 2), 21.
 4. Servais, op.cit. (supra, note 2), 20, fig. 9, 21-5.
 5. Servais, op.cit. (supra, note 2), 20, fig. 9:8-10, and 33, fig. 18.

the jar is closely related in type to that from the Koryphasion tholos.⁶ It contained carbonised grain and was found in the burnt layer. With the possible exception of one sherd,⁷ there were no traces of earlier occupation on the site: although an extremely prominent acropolis, it had no close source of water, and may have been chosen for strategic reasons rather than as an ordinary habitation site.

In Achaea, the site of Teikhos Dymaion seems to have been inhabited continuously from the Neolithic period.⁸ MH material was found, but not in clearly marked layers: it included Minyan and imitations belonging to the Decorated and Angular Minyan phases.⁹ Three sites identified in the area of Pharai¹⁰ have produced consistent evidence of a late phase of MH, with material comparable to that of Thermon in Aetolia: it was characterised by low-stemmed kraters with two or four angular strap-handles, kantharoi with raking handles, coarse jars with pointed bases, and large Matt-Painted closed vases and goblets, decorated in black on a red, brownish or white-slipped surface (see FIG.11 for examples). On the sites, traces of buildings with straight walls and one or two childrens' cist-burials were found. In the same

6. Hesperia 23 (1954), Pl. 38:6.

7. Servais, op.cit. (supra, note 2), 19, note 3.

8. Mycenaeen Gazetteer, 82, no. 282; cf. E.I. Mastrokostas, in Praktika 1964, 62-3, 1965, 121-2.

9. E.I. Mastrokostas, in Praktika 1964, 63-4, 1965, 129.

10. N.S. Zapheiroopoulos, in Praktika 1958, 167-76.

area, at Mirali, two tumuli were excavated.¹¹ Each covered a stone cairn, which in one case was heaped over a single burial in a shallow pit, provided with a rounded kantharos in a smooth grey ware, clearly an imitation of Minyan. Other sherds of this ware were found in the fill, with much coarse yellow ware and a white-slipped fragment banded in matt black. This tumulus clearly belonged to a middle or late phase of MH, and, although it contained only one burial, may be considered a link in the chain of tumuli from Messenia to Epirus.

The stratigraphical evidence from Thermon in Aetolia is such that it is impossible to be certain whether the houses and MH pottery preceded or were contemporary with the decorated LH I-II material found:¹² this problem will be considered further below, in Chs. VII and VIII. However, there is unimpeachable evidence for MH in the Ionian Islands. At Pelikata on Ithaka,¹³ unstratified Minyan sherds were found, including one probably Argive Minyan, several pieces of Angular Minyan vases, including a goblet-stem, and several fragments of kantharoi in blue-grey ware with incised spirals, resembling those from Olympia. Similar pieces were found with some possible Matt-Painted at Polis.¹⁴

11. N.S. Zapheiropoulos, in Praktika 1952, 398-400.

12. K.A. Romaios, in Deltion 1 (1915), 225-79, 2 (1916), 179-89.

13. Pelikata, 29-31.

14. S. Benton, "Excavations in Ithaka III, The Cave at Polis II", in BSA 39 (1938-39), 6-8.

On Kephallenia, Grey Minyan pieces have been found at two sites,¹⁵ and whole kantharoi, probably in the local imitation of Grey Minyan, were found in cist-tombs at Kokkolata, which also contained plain vases and a bronze dagger.¹⁶ ~~These graves may originally have lain under a tumulus, since the plan shows a curved wall above them.~~ At Oikopeda, a tumulus contained a vase so similar to the late Matt-Painted 'Vapheio cup',¹⁷ that it probably dates from the Late Phase: since the finds are probably mostly Mycenaean, it will be considered in more detail below. Obsidian blades found on Zakynthos, and a possible "factory" on Cephallenia, could belong to this or an earlier period.¹⁸

On Leukas, a great many tumuli have been found, as well as some isolated cist-burials.¹⁹ The great R group of tumuli were probably all of EB date: the weapons were consistently of copper, and the vases mostly had EB, often specifically EH II, connections.²⁰ However, two tumuli, S and F, and probably the isolated cists, which contained nothing but a single burial and sometimes a few sherds, were MH. S was a round

15. S. Benton, "The Ionian Islands", in BSA 32 (1931-2), 220 (Korneli), 225 (Kakolangada).

16. P. Kavvadias, in Praktika 1912, 247-68, especially 250-53; cf. BSA 32 (1931-2), Pl. 40:c.

17. ArchEph 1932, 13, fig. 14: top left.

18. Benton, op.cit. (supra, note 15), 213, 215-6 (Zakynthos), 222 (Loutraki, Cephallenia).

19. W. Dörpfeld, Alt-Ithaka (1927), I, 207-50, 286-318.

20. Dörpfeld, op.cit. (supra, note 19), I, 291 (weapons); II, Pls. 64-6, note especially sauceboats, (Pl. 64:1, 3, Pl. 65:1).

tumulus, F a rectangular one with a square addition at one end: both were of earth held in by a stone perimeter, and contained mainly slab-built cists, with one or two inhumations. Burials included adults and children: not all had goods, and of these few had anything but pottery. Angular deep bowls and kantharoi, one a 'northern' type with raking handles, give a rough date for the burials,²¹ being obviously derived from Angular Minyan: others were of more local type. The most important burials in F were 5 and 7, the former a woman with a silver and a bronze circlet, and agate bead, the latter a man with a copper spearhead and bronze dagger with silver-headed rivets. The spearhead was of the 'shoe-slot' type found in Epirus, Thessaly and other parts of Greece²² (see FIG. 16 for type), while the dagger was the usual flat broad-bladed type. In S, four burials were provided with bronzes, a broad dagger, two knives, a saw and four chisels. Two also contained sets of flint arrowheads, and these had further gifts, in one case, two whetstones, two arrow-polishers and two whole boar's tusks, in the other, three odd pierced bronze fittings, a flint awl and flint flakes.²³ The knives were of Sandars Type 6b, already noted at Volimidia,²⁴ which had a largely northern distribution: the other bronzes were of well-known MB

21. Dörpfeld, op.cit. (supra, note 19), II, Pls. 72:3, 6, 10, 73:1, 3, 7, 9.

22. Dörpfeld, op.cit. (supra, note 19), Pls. 73:16, 74a; N.G.L. Hammond, Epirus (1967), 337, fig. 23:B-C.

23. See Appendix 1 for fuller descriptions of this material.

24. Supra, (iii), note 30.

types, as were the stone implements. These assemblages resemble that of Kephalovryso T.1 at Volimidia in their concentration on weapons rather than finery, although the weapons may have been more used for hunting than war. The silver objects are evidence for a mild prosperity, but there seems to have been a decline in the island's wealth since the EB period, to which the gold and weapons of the R tumuli belong.²⁵ The weapons and pottery of the MH tumuli show that Leukas was closely associated with the MH world, probably its furthest outpost to the north-west. (See FIG. 14 for plan of Tumulus F)

Very little can be said by way of summary for this area. The 'northern' connections of the material from the Pharai area may be noted; but more important are the links shown by the appearance of the Type 6b knife in Messenia, Leukas and Epirus, and of the 'shoe-slot' spear in Leukas, Epirus and Thessaly.²⁶ In contrast, there is hardly any clear evidence for interest on the part of the Aegean in this remote area; but further discussion of this point and of the trade-connections of the west of Greece generally must be postponed to Section 5.

25. Dörpfeld, op.cit. (supra, note 19), II, Pls. 60-62.

26. Hammond, op.cit. (supra, note 22), 328-9 (knives), 337 (spears), with references.

(v) Attica, the Megarid, Aegina (See MAP 5)

The area covered by this section should be considered a geographical rather than a cultural province. Relatively few MH sites have been found here, but MH material has appeared in excavations at nearly all the later centres: only Salamis remains an archaeological blank until the beginning of the Mycenaean period. Unfortunately, the evidence must most often be considered in isolation, since traces of EH III are extremely rare, and of Early Mycenaean scanty and uninformative. For the most part, the evidence consists of pottery, which superficially suggests unity both internally and with the Argolid-Corinthia-Boeotia area; however, the evidence from burial-customs does not altogether support this view, and other peculiarities are revealed in closer study. I shall therefore treat the major geographical subdivisions separately.

The Kolonna Hill site on Aegina is arguably the most important of this whole area.¹ It seems to have existed continuously as a fortified town, importing pottery from all over the Aegean, from some time in the Early Bronze Age: there are remains of five consecutive phases of fortification, of which the first three are attributed to EH, the fourth to MH, and the fifth to the Early Mycenaean period. The detailed evidence in support of this division has never been published, and it is clear from the captions of unpublished photographs in the German Archaeological Institute at Athens that the excavator, Welter, attributed to EH some types of pottery that would now be classed as MH.

1. Aegina, 11, fig. 9, and 14-21.

More than one of the fortifications may therefore belong to the MH period: the one attributed to MH by Welter was built of mud-brick on a stone foundation. It had rectangular towers at intervals, a complicated entrance-system, and a series of small rooms constructed against the inside of the wall, which sometimes form part of complexes stretching further into the citadel. This extremely sophisticated system has its closest relatives in the Cyclades, in the probably earlier walls of Chalandriani on Syros and Aghios Andreas on Siphnos, and the later ones of Aghia Irini on Kea;² and there is further evidence that Aegina was closely linked with the Cyclades. The pottery included the whole range of MH wares, together with imports and imitations of MM and many examples of Cycladic types:³ this great variety demonstrates the ability and inventiveness of Aeginetan potters. It seems very likely that the Cycladic barrel-jar (see FIG.8) was introduced to the mainland from Aegina, where many fine examples have been found.⁴ Indeed, the distinctive fabric of these jars and of much other Matt-Painted, a thick, porous, coarsish yellow-green ware decorated in dull black or light violet paint, has been called "Aeginetan".⁵ It is by no means impossible that the barrel-jars found all over the mainland, which are

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2. Supra, (iii) The South-West Peloponnese, note 8; Kykladika II, 127-8, fig. 8; Caskey 1968 B, 69, Pls. 2-3.
 3. G. Welter, in AA 40 (1925), 318, with fig. 4 on 319-20, for "Kamares" imports: also unpublished photographs in the German Archaeological Institute in Athens.
 4. Aegina, 17, figs. 19-20.
 5. Cf. most recently, Prehistoric Euboea, 97; Aegina, 18.

extremely uniform in their decoration and quite distinct in style from other early Matt-Painted should be imports from Aegina.

The evidence of a house excavated by Stais⁶ reinforces still further the Aegean connections of Aegina. The remains of the plan show many small rectangular rooms in almost regular rows, built of small stones mortared with clay and plastered with lime, and having floors of stone slabs. Burials, usually of children, were found not only beneath the floors but in the walls and enclosed against them, partly above the floor: it is possible that the latter are later burials, dug down from later strata. The pottery included typical Matt-Painted barrel-jars and a bowl, fragments of beaked jugs, another Matt-Painted jar with a specially polished horizontal band, on which was painted a simple spiral decoration flanked by white dots,⁷ and examples of white-on-dark and Cycladic wares.

The sophistication of this building, the fortifications and the pottery make the fact of Aegina's importance clear: the reasons for this importance are less obvious. If the barrel-jars found all over Greece are indeed Aeginetan, they provide evidence for widespread activity by the Aeginetans: this suggests the possibility that they were middlemen, distributing to the mainland Cycladic goods such as obsidian and collecting mainland goods for trade with the Aegean. They would thus have held a similar position to that with which they have

6. B. Stais, in ArchEph 1895, 244-50, with figs. 2-3.

7. ArchEph 1895, pl. 10:5, 5a.

been credited in the Archaic period. Certainly, the quantities of imports found at Aegina suggest that it was a trading centre of considerable importance.

Good MH material has been found at Palaiokastro, near Megara, and it has been reported from Megara itself.⁸ At Eleusis, both the settlement-site and an extensive cemetery have been excavated. The house-foundations⁹ were not very well preserved, but there were at least two levels, divided by an ash-layer; the lower was founded on the rock, which was covered by another ash-layer. Both of these ash-layers were widespread. The lower stratum included apsidal megara, in one of which there was found a ring-stemmed goblet;¹⁰ other goblet-stems were found on the rock.¹¹ The houses, then, belong to the Angular Minyan phase or later; but pottery from the settlement includes earlier material, a handmade rounded bowl and good decorated Minyan.¹² Some incised and stamped pieces from the lowest layers are probably Cycladic.¹³

Intramural burials of children were commonly found under or in the

8. Praktika 1934, 51, fig. 11; D. Fimmen, Die kretisch-mykenische Kultur (1921), 9.

9. Eleusis, 17-29.

10. Eleusis, 26 and 67, fig. 41.

11. Eleusis, 13.

12. Eleusis, 77, fig. 53 (handmade bowl), 73, fig. 48, 80, fig. 56 (Decorated Minyan).

13. Eleusis, 105, fig. 84:1-3, 5, 7.

spaces between houses; some were in pithoi or covered by large vase-fragments, other were in cists built of slabs, pebble walls or mud-bricks, or were ordinary inhumations.¹⁴ Two graves, Ts. 5 and 6 in Philo's Stoa, were of more interest. Both contained adults, and were fairly large, slab-walled and pebble-floored; one was built partly above the other. T.5 contained no grave-goods, although three stone arrowheads were found underneath its floor. In T.6, on the other hand, the dead man was provided with a small jug, a dagger, a bone strip, decorated with incised circles, and over fifty small plates of boar's tusk.¹⁵ The dagger was broad and flat, with three silver-capped rivets across the base, and was of almost pure copper: the type is common, but it is unusual to find a copper example. It was presumably cast by a smith without access to tin: too few MH tools and weapons have been analysed for it to be clear how common this was. The bone strip and the boar's tusk plates, which were flat, trapezoidally-shaped, and had two perforations in the centre (see FIG.¹⁵), may have been used to decorate some piece of clothing or a helmet; they provide evidence for a rudimentary skill in the working of bone and tusk as well as for some interest in display.

A large cemetery was found to the west of Eleusis.¹⁶ Graves were found in an area over three hundred metres long: of a total of 134, 57

14. Eleusis, 36-57, especially 49-57 (Ts. 5 and 6).

15. Eleusis, 144, fig. 119, and 147, fig. 121.

16. G.E. Mylonas, in Praktika 1952, 58-72, 1953, 77-87, 1954, 50-55, 1955, 67-77, 1956, 57-62.

were certainly MH and many others were probably of the same date.

The earlier graves were mainly slab-built cists; before the end of MH these were developed into large walled graves, intended for several burials. An entrance was constructed to make reuse easier:¹⁷ at first this was situated in one of the long sides, but later in an addition at one end, producing a characteristic gamma-shape. These

graves often continued in use in LH, and the type was never abandoned in favour of the chamber-tomb. They rarely held contents of any value: goods mainly consisted of Grey Minyan and Matt-Painted vases, generally fine types of the Late Phase. One jar of a ware occurring at Athens, coarse red with matt white bands, was found. In one grave, reused in LH III, the original MH burials had been placed in a pit, apparently with their grave-goods: these included circlets of bronze wire, bronze and rock-crystal beads, and a sealstone decorated with dolphins.¹⁸

Another grave of late MH date contained five circlets of bronze wire covered with gold leaf,¹⁹ and a third two extraordinary clay animal-rhyta in the shape of standing oxen with basket-handles on the back.²⁰

These are unique, and may be imports: the rock-crystal beads may originate from Crete, where the material is found, and the sealstone surely does, for there is no evidence for a gem-cutting school

17. G.E. Mylonas, in Mycenae and the Mycenaean Age (1966), 89-90.

18. G.E. Mylonas, in Praktika 1952, 66 (T.θπ4).

19. G.E. Mylonas, in Praktika 1955, 68 (T.Δπ8).

20. G.E. Mylonas, in Praktika 1955, 70, Pl. 19:β (T.Eπ2).

anywhere else at this period: but possibly it is an intrusion, for no other sealstones have been found in MH contexts except in Grave Circle B, where they were found in graves that also contained LM IA pottery.²¹ These finds show that Eleusis was prosperous in the Late Phase and had overseas contacts: the development there of the built family-grave is at present without clear parallel elsewhere, although there were comparable built graves at Lerna.²²

MH remains have often been found at Athens, but they are in general unimpressive. There seems to have been settlement both on the Acropolis and in the plain below: for instance, fairly large deposits of pottery have been published in the account of excavations on the north slope of the Acropolis.²³ The earliest types certainly represented are Decorated Minyan, but the bulk of the material belongs to the later phases. Several apparently local wares were found, a coarse white-slipped ware with Matt-Painted decoration, a coarse red ware decorated with bands and pendent triangles in white, and much red or black coated ware. Some incised pieces were probably of Cycladic origin, and two fragments seem to belong to the mature Phylakopi Matt-Painted style.²⁴ Vases from a well in the

21. See Ch. III, Appendix (1), under Graves Mu, Omicron, Gamma.

22. Supra, (i) The Argolid-Corinthia, note 33.

23. O. Broneer, "Excavations on the North Slope of the Acropolis: the Prehistoric Pottery", in Hesperia 2 (1933), 356-63; H.D. Hansen, "The Prehistoric Pottery on the North Slope of the Acropolis, 1937", in Hesperia 6 (1937), 539-58.

24. Incised: Broneer, op.cit. (supra, note 22), 357, fig. 27:h-j. Matt-Painted: Hansen, op.cit. (supra, note 22), 554, fig. 10:c-d.

Agora²⁵ included a finely decorated spouted bowl, close in shape to the Minoan holemouth-jar. Material found recently in the area south of the Acropolis²⁶ included most of the same categories: a Grey Minyan goblet of late type was found in a tomb. From a bothros in the Asclepieion area came several complete vases,²⁷ including a coated Cycladic duck-vase.

A tumulus found near the Acropolis has often been described as MH,²⁸ but the evidence is very vague. Two layers of burials were found in an oblong mound: the only certain goods were some stone arrowheads with tangs, of a type that elsewhere has been found in pre-MH contexts.²⁹ The sherds of pottery found are said to include 'Lydian', the old name for Grey Minyan: but they have not been published, and could equally well be Neolithic grey ware. On the whole, it seems better not to consider this grave MH. An unpublished grave from the Kerameikos³⁰ contained a bronze bracelet as well as three unusual vases: one a goblet with light-on-dark decoration, another a finely incised jar that may be Cycladic. Taken with the other remains, this suggests that the Acropolis was the centre of a settlement-area of

25. T.L. Shear, "The Campaign of 1937", in Hesperia 7 (1938), 336-8; fig. 19 on 337 shows jar.

26. K. Demakopoulou, "πρωϊστορικὴ Κεραμεικὴ νοτίως τῆς Ακροπόλεως", in Deltion 19 (1964) A, 62-72, especially 65-9, 71.

27. N. Platon, in Deltion 19 (1964) B, 24, Pl. 14:γ-β.

28. A.N. Skias, "Τύμβος πρωϊστορικὸς ὑπὸ τὴν Ἀκρόπολιν", in ArchEph 1902, 123-30.

29. H.-G. Buchholz, "Die Pfeilglätter aus dem VI. Schachtgrab von Mykene und die helladischen Pfeilspitzen", in JdI 77 (1962), 21.

30. K. Kübler, "Ausgrabungen in Kerameikos", in AA 51 (1936), 197-8, with figs. 18-19 on 205-6.

considerable extent: Athens was surely an important centre, clearly in touch with the Cyclades.

Other settlements in western Attica are represented by a few sherds found at sites along the coast:³¹ more considerable remains are known from the east. At Thorikos, two building-strata of late MH date have been found:³² the walls were well-constructed and a threshold-slab was covered with stucco. In the upper layer, litharge, the industrial waste produced by the separation of silver from lead, was found, associated with two sherds that are probably Cycladic and some late MH: in the lower layer, a probable Minoan sherd, dated LM IA by the excavators, was found. This clearly establishes that silver was being mined near Thorikos, and presumably refined there, by the beginning of the Late Bronze Age, providing a good reason for foreign interest and later prosperity. Stais's finds,³³ which included pithos-burials and inhumations in pits cut in the rock of the acropolis, may also have been MH, but the pottery has never been published.

At Brauron, remains of a settlement have been found on the acropolis.³⁴ The pottery includes one grooved piece, probably

31. E.g. Aghios Kosmas, fig. 122:5-8, and a fine Decorated Minyan sherd from Mikri Kavouri in the collection of the British School of Archaeology at Athens.

32. Thorikos III, 20-24.

33. Stais, op.cit. (supra, note 6), 229-34; cf. also Praktika 1893, 15-16.

34. D.R. Theochares, "Ἐκ τῆς προϊστορικῆς Βραυρωνίας", in Praktika 1950, 188-93; J. Papadimitriou, in Praktika 1956, 73-89, especially 77-9.

Decorated Minyan,³⁵ but otherwise seems to belong to the Angular Minyan phase and later. Traces of a possible fortification-wall have been found, associated with late MH and LH I-II pottery: but there can be no certainty of its date or purpose, and the style of its construction is no guide, since it is a simple wall of small stones. A fine late Matt-Painted vase, originally described as coming from a chamber-tomb at Porto Raphti, has been plausibly argued to be from Brauron.³⁶ We may suspect that Brauron was a site of some importance, but very little is known.

MH material has been found at Marathon, Aphidna, and other sites in central and east Attica,³⁷ but the only discovery of importance is the tumulus near Aphidna.³⁸ The remains were very disturbed, but it was estimated that its diameter was originally 24 metres, which would make it the largest tumulus known in MH Greece (see FIG.14 for plan). Thirteen burials, some superimposed, were found, including some made in slab-built cists and others in pithoi: these pithoi were large, ranging from 1.40 to 1.80 metres in height. Grave-goods generally consisted of a vase or two in grey ware: the pithoi were closed by early Matt-Painted or plain bowls. One pithos-burial was well-provided, containing one silver and six gold circlets and a series of vases. These included a finely incised stemmed pyxis with a lid, a

35. Praktika 1950, 191, fig. 5:a.

36. S.Iakovidis, "Η μεσοελλαδική προχούση ἐν τῇ Στεριᾷ", in AthAA I (1968), 184-9.

37. Mycenaean Gazetteer, 107-10 (Spata, Askitarion, Agriliki, Cave of Pan, Kotroni, Chasia).

38. S. Wide, "Aphidna in Nord-Attika", in AthMitt 21 (1896), 385-409, especially 388-97.

triple-bodied jug, two high-handled cups and two basket-handled jars. The jug and jars were decorated with parallel grooves round the body and have a Grey Minyan appearance, while the pyxis was black-coated. Of the cists, one had bronze circlets, fragments of silver and bronze, and beads of a transparent blue-green material, thought to have been crystal; another had an obsidian knife and arrowhead. The pottery from the richest pithos-burial is not orthodox MH, and has few parallels:³⁹ the pyxis may be Cycladic. The Matt-Painted bowls, however, are normal, and suggest a date fairly early in MH. This tumulus clearly contained people of some importance: its presence so far away from the west coast of Greece, the tumulus-area, the region otherwise thought of as the area of tumulus-burials, and the peculiarity of some of its contents, cannot be explained at present.

The remains from MH Attica are tantalising. There are clear signs of a number of centres, which in several cases seem to have had peculiar local traditions; but these remains cannot be connected to suggest any general picture of Attic development. Cycladic activity is apparent, as it was in EH II⁴⁰ but the earlier centres, such as Raphina, Askitaro and Aghios Kosmas, seem to have been almost completely abandoned, and no continuity of Cycladic interest can be demonstrated.

39. There is an undecorated Grey Minyan basket-handled jar from Orchomenos, on show in the National Museum at Athens.

40. Caskey 1964 A, 13-14; supra, (2) The EH III Background, note 96.

(vi) Central Greece: Euboea, Boeotia, Phocis (See MAP 6)

Again, this must be considered a geographical rather than a cultural province. Like Attica, it is more closely related to the Argolid-Corinthia in its pottery than was most of the Peloponnese. Despite its size and importance, there have been very few excavations, although MH material has been found at many centres of later occupation, and only Euboea can be considered to have been even partially explored and surveyed. Although an EH III phase has been defined here, the majority of the known MH material belongs to the later phases, and the gap is only bridged at Lefkandi and Kirrha: no full sequence is known from Boeotia, which must always have been the most important part of this area.

There is so far evidence for some two dozen sites on Euboea, of which Manika and Lefkandi have been excavated.¹ It seems safe to conclude from the surveys and excavations that several pottery fabrics common in the Argolid-Corinthia, such as Argive Minyan, Matt-Painted and incised coarse, were rare or hardly known in Euboea: on the other hand, Grey Minyan of excellent quality and imitations of it in a plain buff to yellow ware were very common. At Manika, the excavations produced little beyond evidence of MH occupation: at Lefkandi, the earlier phases seem to have been better represented in the occupation-strata than the later ones. Two vases found in the EB graves at Manika seem to be of

1. Prehistoric Euboea, passim, especially 56 (excavations at Manika), 91-9; Lefkandi, 9-11.

late MH date,² and are presumably to be explained as grave-goods put in on an occasion of re-use: at Lefkandi, the last MH stratum contained an oblong house of two rooms, whose plaster floor had been relaid many times. The floor-deposit in the house included a Grey Minyan kantharos, two plain goblets on low stems, and a larger goblet with a simple decoration in black and orange matt paint: these types all had rounded profiles and thick handles, attached inside the rim.³ Large kraters and goblets in the bichrome ware seem to be one of the few types of the Late Phase to be at all popular in Euboea. This fact, and the late appearance of Argive-type Matt-Painted, suggests that the island was slightly remote from developments in the central area: but a MM III sherd found at Amarynthos⁴ demonstrates that it was not entirely cut off from the outside world.

Boeotia is mainly represented by finds from Thebes, Orchomenos and Eutresis. Rich MH strata have been discovered at Thebes, but little has so far been published. Finds include many slab-built cists, containing the bodies both of children and adults.⁵ These rarely contained any goods but pottery, usually Minyan: one fine late type has been published.⁶ Other goods include 'glass' and carnelian beads,

2. Euboean Tombs, Pl. H': loop-handled cup marked 5; Pl. IA': centre, plain kantharos.
3. Lefkandi, 10, fig. 11, shows one of the goblets.
4. Prehistoric Euboea, 97, 99.
5. E. Touloupa and S. Symeonoglou, in Deltion 20 (1965) B, 233-5.
6. Deltion 19 (1964) B, Pl. 231: lower row.

and from one grave some fine gold ornaments with pendent spirals, probably related to those of Shaft Graves Omicron and III.⁷ This is the best indication so far of the potentialities of Thebes as a MH site.

At Orchomenos there were three MH strata, containing many graves.⁸ Unpublished vases in the National Museum at Athens include some good Angular Minyan and Late Phase types, an incised coarse jar, an early Matt-Painted askoid jug, and a bichrome-decorated goblet and hydria. Only a few of the graves had any grave-goods, and only those of children contained anything but vases: one had a necklace of small 'glass' beads, and two had bronze-wire spirals. A peculiarity of the Orchomenos graves is that most were lined with mud-bricks. These were long and narrow, and were often used to make the grave-floor and even its roof: the graves were of course small, usually those of children.

Eutresis was probably less important than either of these sites, but it is the only one to have been fully published. The pottery includes types of the Decorated Minyan phase,⁹ but the three building-levels all seem to belong to the later part of the Angular Minyan phase and later: one house assigned to the first level even contained early bichrome-decorated ware.¹⁰ A remarkable number of Cycladic pieces

7. S. Marinatos, "Θήβαι", in AthAA 1 (1968), 11, 16-17.

8. Orchomenos I, 53-69; Prehistoric Thessaly, 193-6.

9. Eutresis, 132-3; 140, fig. 190:7, 143, fig. 199.

10. Eutresis, Pl. 16:7-8.

were found in houses of the first level, all with incised, grooved or stamped decoration on a lustrous dark surface: they include pyxis-lids, duck-vases, and an odd animal-shaped rhyton.¹¹ These must presumably have come from some island other than Melos, where the change to painted wares had already taken place by the beginning of the Middle Bronze Age.¹² Unusual Matt-Painted types,¹³ and red-coated vases decorated in white,¹⁴ were plentiful at Eutresis: small vases of the Late Phase were not particularly common, but various forms of bichrome-decorated ware were well represented.¹⁶ Houses included apsidal and rectangular megara, and more complex types based on the megaron.¹⁷ Cist-graves and inhumations of normal types have been found, containing vases, a steatite pendant and a fine carnelian necklace.¹⁸ One house of the first level contained a bronze ogival dagger:¹⁹ one of the second seems to have included a workshop for

11. Eutresis, 183-6.

12. Phylakopi I, 249-51.

13. E.g. Eutresis, Pl. 13; 156, figs. 219-20, 160, fig. 223.

14. Eutresis, 126-32.

15. Eutresis, Pl. 15:2-4, are examples.

16. Eutresis, 170-71, Pls. 16-17.

17. Eutresis, 31-64.

18. Eutresis, 221-6; Pl. 20:1 for necklace.

19. Eutresis, 218-9, with fig. 288:8 on 217. (See FIG. 15)

the manufacture of boar's tusk plates.²⁰ These were of different types from those of Eleusis,²¹ being long with curved sides and perforations at each corner (See FIG. 15). These finds seem to indicate that Eutresis was a prosperous site.

Sites in Phocis fall into two groups, those up the Kephisos river from Orchomenos, and those on the south coast: the former include Aghia Marina and Drachmani, the latter Kirrha and Krisa. Grey Minyan has been found at Aghia Marina, while at Piperis, near Drachmani, a deposit of very late Grey Minyan pottery has been found.²² There were many stemmed goblets, some having four handles and most having incised rings on the stem, some low krater-like bowls, with horizontal rounded handles on the body, a kantharos, and various jugs and jars that were probably of plain ware (~~See FIG. for some examples~~): no Matt-Painted was noted. The goblets in particular have links with late Eutresis material and the Circle B graves, where the same types appear.²³ This group emphasises the durability of the Grey Minyan tradition in the north and its production of new types late in the period.

The Drachmani tumulus belongs to a very early phase.²⁴ In it were found the body of a woman, a bronze knife with a knob behind the point

20. Eutresis, 54, 220, fig. 290:4-16.

21. Supra, (v), note 15.

22. Prehistoric Phocis, 256-7, with figs. 9-10 on 261-2; V. Childe, "On the Date and Origin of Minyan Ware", in JHS 35 (1915), 196-7.

23. Eutresis, 136, fig. 183:8, fig. 184:4-5; Praktika 1952, 455, fig. 23 (Grave Delta).

24. G. Sotiriadis, in ArchEph 1908, 93-6.

(an early example of Type 6b), four gold earrings, and seven vases. These were two Early Minyan bowls, a jar and krater of Helladic type, a fruit-stand-like goblet, and two beaked jugs of foreign appearance: one, decorated in dark paint on a yellow ground, was probably Cycladic, deriving ultimately from MM IA, while the other, with simple geometric decoration in red on black, is unlikely to be local. The thigh-bone of an ox was placed by the woman, and in a pit nearby burnt corn and ashes were found. On top of the mound there was a large and elaborately decorated jar. This burial was clearly of great importance, involving offerings at the time of burial and possibly later, if the vase on the mound was meant to receive libations: it may have been a grave-marker. It is difficult to believe that this was the only burial of its kind, but it would also be dangerous to assume that such burials were common. The grave-goods show that even at this early period it was possible for an important person to possess objects that came from far afield.

At Kirrha, five phases have been distinguished, all but the last represented by scattered walls, graves and deposits in five deep soundings: the phases called MH IA and MH IIIA are particularly badly represented by walls.²⁵ The MH IA vases may fairly be called Early Minyan,²⁶ but after them there follows a gap in the ceramic series to the Angular Minyan phase. This includes one fine group with a low-stemmed Grey Minyan kantharos, two Matt-Painted beaked jugs, an

25. Kirrha, 83-95; cf. Pl. 4 for sections of the soundings.

26. Op.cit., supra, (2) The MH Pottery Sequence, note 8.

incised vase, and an incised flask of the same 'Balkan' type as that found at Lerna.²⁷ Other fine Matt-Painted jugs and pieces of a barrel-jar of 'Aeginetan' type were found:²⁸ it does not seem that the Argive type of Matt-Painted was well represented.

The Late Phase was represented both at Krisa and Kirrha by houses and graves.²⁹ Loop-handled jars, rounded cups, goblets, and small amphora-like jars, were particularly common in the fine plain and Matt-Painted wares: there also appeared a form of bichrome ware, using orange-brown and black on a light surface. Birds, dolphins and insects are among the decorative motifs, drawn in a vigorous style.³⁰ The houses were of rectangular type with complex plans: at Kirrha, the only complete plan resembles two megara back-to-back.³¹ Intramural burial remained the normal custom: graves of this phase were often large and stone-built, holding two or more adults. The graves at Kirrha called MH IIIB by the excavators cannot all be so confidently assigned, since the site was used as a burial-ground in LH times too, as has been shown by more recent excavations.³² But some were certainly of the Late Phase: T.58 contained a Matt-Painted jar, gold

27. Kirrha, Pls. 42:7-8, 43:44, 44:34, and no. 33 on p. 130.

28. Kirrha, Pls. 41, 42:29, 49.

29. Kirrha, 91-4 (MH III B); Krisa I, 301-14, II, 122-5.

30. Kirrha, Pls. 31-3.

31. Kirrha, Pl. 12, houses made up of a-b and c-e.

32. Y. Nikopoulou, "Ἀνσκαφή προϊστορικῆς Κίρρας" in AthAA 1, (1968), 144-6.

spiral and steatite whorl.³³ Others had a mixture of late MH and Early Mycenaean types, and goods such as gold spirals and bronze pins:³⁴ MH traditions may have continued a bit longer here than in the Peloponnese. At Krisa, one incised piece may be Cycladic:³⁵ there are no other obvious imports from the Aegean, but one may suspect Cycladic influence behind the 'animal style' of the late pottery.

In general, central Greece seems to have been fairly conservative. The Grey Minyan tradition lasted long, retaining the grooved and ridged decoration of Decorated Minyan on later types:³⁶ the built-grave tradition, once established, remained important in LH times. Links with the south seem strongest in the Late Phase, when there are signs of considerable prosperity. It is possible that further finds will show that Thebes was almost as important in the transitional MH-LH period as Mycenae, as one might expect from the great Mycenaean palace built there later and the numerous chamber-tombs: at present such a conclusion would be too speculative.

33. Kirrha, 122.

34. Kirrha, 117, 124.

35. BCH 62 (1938), 119, fig. 9.

36. E.g. Eutresis, 136, fig. 184:2, 137, fig. 185:2, 139, fig. 187:2; Kirrha, Pl. 43:25.

(vii) The Spercheios Valley and Thessaly (See MAP 7)

The amount of connection between this area and Greece further south varies within the area and from period to period of the Bronze Age. In the Middle Bronze Age, the culture of coastal Thessalian sites was most closely related to the MH culture: but a varying degree of connection is demonstrable for the whole area. Many sites have been found, mostly of the "magoula" type, built up of the débris of successive settlements: but in general the Bronze Age remains have been badly eroded, and often all three periods of the Bronze Age are represented in a single top layer. In their early study,¹ Wace and Thompson paid more attention to the deep Neolithic strata than to the generally scanty remains of the Bronze Age: more recent excavations have corrected this imbalance to some extent, but the earlier phases of the Bronze Age remain rather obscure. At many sites, the presence of Grey Minyan sherds is the only certain indication of a Middle Bronze Age settlement:² but, as shown, by their late appearance at Argissa, in the late fifth and sixth MB levels,³ these are found only at a relatively advanced stage of the local culture. Nearly all are of

1. Prehistoric Thessaly.

2. Prehistoric Thessaly, 114 (Tsangli), 131 (Rini), 145 (Tsani), 167 (Phthiotic Thebes); Mycenaean Gazetteer, 149 (Velestino), 153 (Tatar Magoula), 161 (Makria Magoula), 163 (Trikkala, Gynaikokastro), 164 (Melitaia); V. Bequignon, "Études thessaliens", in BCH 56 (1932), 148-9 (Ktouri); D.R. Theochares, "Πύραυλος", in Thessalika 2 (1959), 60; EM Cat. I 1, 51, A 282 (Marmariani).

3. Excavations in Thessaly, 30.

Angular Minyan type, pieces of goblets and kantharoi, and it seems most likely that they were imported except at a few sites on or near the coast, where Grey Minyan was truly common.⁴ This large area, then, must be discussed largely in terms of the few excavated sites.

The Spercheios valley is best represented by Lianokladhi;⁵ several other sites in the area have Grey Minyan and local Matt-Painted sherds.⁶ At Lianokladhi remains of a burnt house were found, directly under a few slab-built cists. The house was constructed of wattle-and-daub on stone foundations, a remarkably late survival of this technique: it had three rooms and a very lopsided plan, probably because it had been made up of two houses, set at an angle to one another, that had originally been separate. The middle room contained six storage jars, the eastern one a hearth. The pottery was plentiful, including Grey Minyan and decorated ware as well as plain and coarse. The Grey Minyan shapes were ring-stemmed goblets, kantharoi, and some shallow wide bowls on low stems: they were of fine quality and were probably imported. The decorated ware was a poor handmade reddish ware, sometimes polished, decorated in a thin matt black directly onto the clay: shapes included belly-handled jars, amphorae, wide-mouthed jars with two side-handles, and shallow bowls

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4. D.R. Theochares, in Praktika 1956, 124 (Volos), 1957, 66 (Meleia); op.cit., (supra, note 2), 60 (Aidhiniotiki Magoula); Prehistoric Thessaly, 159 (Zerelia).
 5. Prehistoric Thessaly, 180-91.
 6. R. Hope Simpson and J.F. Lazenby, "The Kingdom of Peleus and Achilles", in Antiquity 33 (1959), 162-5; Mycenaean Gazetteer, 141-3.

with loop-handles and decoration on the rim (See FIG. 8 for some shapes). The decoration was found on the shoulder and belly: it used bars, diagonals, lozenges and triangles, generally hatched or cross-hatched, fringing and wavy borders: subsidiary motifs were pot-hook spirals pendent from the bases of the handles and crossed circles on bases.

High-beaked jugs in the same ware have been found at Pteleon, in the area of Volos, and as far away as Eutresis: much was found at Thermon in Aetolia, and fragments are known from Rini and Tsangli in Thessaly, and Orchomenos and Aghia Marina in central Greece⁷ (See MAP 8).

In its use of triangles and in its jug-shapes the style looks related to early Matt-Painted elsewhere, especially at Kirrha:⁸ some of the shapes and decoration may be more local. A similar whitish ware decorated in red paint has been noted at Argissa, and the style may be linked to a whole tradition of northern Greece that continued to the Early Iron Age.⁹

The sites of Argissa and Chasambali, to the west and north-east of Larissa in northern Thessaly, provide some good information

7. AthMitt 14 (1889), Pl. 11:8 (Volos area); Praktika 1951, 138, fig. 7:α-β, 1952, 175, fig. 12 (Pteleon); Eutresis, Pl. 2:4; K.A. Romaios, in Deltion 1 (1915), 263-5 (Thermon); Prehistoric Thessaly, 113 (Rini), 132 (Tsangli), 196, note 12 (Orchomenos and Aghia Marina).

8. Kirrha, Pls. 41-2.

9. Excavations in Thessaly, 29; W.A. Heurtley, "A Prehistoric Site in Western Macedonia and the Dorian Invasion", in BSA 28 (1926-7), 179, Pl. 14.

on the local MB culture. At Argissa,¹⁰ six strata were assigned to the Middle Bronze Age: Grey Minyan and various types of Matt-Painted only appeared in the last two. The houses seem to have been of rectangular megaron-type, built of mudbrick on stone foundations; the pottery was mostly plain or coarse heavy handmade ware. It included types closely comparable to the domestic pottery of Eutresis, but also the painted ware just mentioned, an incised ware imitating it, some pieces with plastic decoration, and one or two odd types without obvious parallel.¹¹ A fine wheelmade jar or jug with incised decoration of rows of hatched triangles may be a Cycladic import.¹² Children's pithos burials were found below the floors of the houses.

At Chasambali,¹³ the remains of three apsidal megara with clay floors were found in a row, behind which was a fragment of another apse, presumably belonging to a house facing in the opposite direction. Traces of a similar building were found on top of the acropolis. All these houses showed traces of having been burnt. Handmade jars and jugs, a cup and a kantharos were found, the latter having horizontal raking handles of the 'northern' type (see FIG. 11). A probable

10. Excavations in Thessaly, 28-31; see also V. Miločjić, "Ausgrabungen auf den Hagulen bei Larisa, 1955", in AA 70 (1955), 192-217, especially 199-215; the houses are described on 200-03.

11. E.g. Excavations in Thessaly, 54, fig. 24:4, 9.

12. AA 70 (1955), 211-2, fig. 14:3.

13. M.D. Theochares, "Μυκηναϊκὰ ἐκ Λαρίσης", in Thessalika 3 (1960), 50, 53-6; "Δοκιμαστικὴ ἀνσκαφὴ εἰς Χασάμβηλι Λαρίσης", in Thessalika 4 (1962), 35-50.

pithos-burial was found. A series of tombs, apparently cists, was reported, which were apparently found within a stone perimeter-wall:¹⁴ the vases that they contained, in a red handmade polished ware, have been assigned by the excavator to the Early Mycenaean period, on the grounds of the absence of 'Minyan' types. In fact they have good counterparts in the late MH tombs at Sesklo, as is shown by the parallels adduced by the excavator, and it seems better to assume that they are of this date. They include kantharoi, high-handled cups, and various forms of jugs, often having horned projections opposite the handle. Imports included a few Grey Minyan sherds, found on the surface of the site, and a wheelmade squat jug with Matt-Painted decoration that came from a tomb. Both here and at Argissa, the picture is consistently one of a provincial MH culture, clearly connected with those to the south but having many local features: this may be typical of the whole Thessalian plain.

Along the coast, connections with the MH world were even closer. Slab-built cist-graves were found at Gritsa, near Pteleon, and further north at Zerelia, as well as much Grey Minyan pottery and, at Gritsa, good 'Lianokladhi Matt-Painted'.¹⁵ The grave-goods included Grey Minyan vases, of the same types as those found at Lianokladhi, Matt-Painted and plain vases: at Zerelia a man had been buried with a bronze

14. M.D. Theochares, op.cit. (supra, note 13), in Thessalika 4 (1962), 35, note 2.

15. N.M. Verdelis, in Praktika 1951, 129-41, 1952, 164-79, 1953, 123-4 (Pteleon); Prehistoric Thessaly, 161 (Zerelia).

knife and flint arrowhead. The Grey Minyan vases showed local features such as grooving round the belly: one plain and one Matt-Painted at Gritsa were close in shape to the later Cycladic jugs with bent-back neck.¹⁶ The evidence consistently suggests that fairly late in the Angular Minyan phase strong influence was felt from further south, probably central Greece, and that there was some connection with the Cyclades.

At both Volos and Neleia, several strata of the MH period have been reported,¹⁷ but the published pottery is confined to an unusual Grey Minyan kantharos with only one handle, an early Matt-Painted jug, described as characteristic, a red-coated jar decorated with white bands, and pieces of a late bichrome vase in the Shaft Grave style, with a frieze of ships instead of birds.¹⁸ Grey Minyan was extremely common and was locally imitated in coarse wares: the types represented seem to have been bowls, kantharoi and goblets of the Angular Minyan phase. Matt-Painted was fairly common, and bichrome-decorated vases appeared in the late strata: as at Lefkandi, the late fine Matt-Painted style seems to have been rare or completely absent. Plain wares, including some Yellow Minyan, were also common. One probable import was the top of a holemouth-jar, with decoration of

16. Praktika 1952, 174, fig. 10:α, 177, fig. 14; cf. Phylakopi II, Pl. 5: especially 7, 8, 13.

17. D.R. Theochares, in Praktika 1956, 123-4, 1957, 61, 64-6.

18. Praktika 1956, Pl. 43:2, 1957, 67, fig. 6; D.R. Theochares, "Iolkos, whence Sailed the Argonauts", in Archaeology 11 (1958), 14-15.

spirals in white and red on dull black: this is surely Minoan, probably MM IIB.¹⁹ A jug in the 'Lianokladhi Matt-Painted' style, already noted, and some plain vases probably come from tombs in the neighbourhood.²⁰

The remains from Sesklo and Dhimini, however, are the most interesting in Thessaly. Only scanty remains of houses were found on the sites, but the pottery collected included angular Grey Minyan and local grey- or black-slipped imitations, and a great deal of the local reddish plain ware.²¹ Finds from Sesklo, assigned to the MB level, were some 'arrow-polishers', two arrowheads (one of flint and one of obsidian), five stone moulds, and a ladle containing traces of copper.²² The moulds were for a slotted spear, a double axe and a pointed object that might be a type of spear or pike: a lead double-axe of the same type as the mould was also found on the site.²³

Even more important remains came from the tombs.²⁴ No less than 160 were found at Sesklo, the majority in the remains of the

19. I was able to see this through the courtesy of Dr. Theochares; Mr. G. Cadogan has advised me on the date.

20. AthMitt 14 (1889), Pl. 11.

21. Dhimini and Sesklo, 65-8 (Dhimini), 107-14 (Sesklo); Prehistoric Thessaly, 61-2 (Sesklo), 77-8 (Dhimini); for sherds from Dhimini, see BM Cat. I 1, 51-3 (A 283, 290, 292, 295), for the local plain pottery, Dhimini and Sesklo, 255-80.

22. Dhimini and Sesklo, 322-4 ('arrow-polishers'), 325 (arrow-heads), 333-5 (moulds), 349 (ladle).

23. Dhimini and Sesklo, 354-5.

24. Dhimini and Sesklo, Ch. 3; Prehistoric Thessaly, 66-8, 81-2.

settlement, but three small groups elsewhere in the neighbourhood. At Dhimini, another eighteen were found. Nearly all of these were slab-built cists, but the larger examples might be built of stones or mud-bricks, and there were three pithos burials. Burials were always contracted: several tombs contained more than one burial, the maximum being four. Only twenty-six of the Sesklo and three of the Dhimini tombs contained any goods, but these held a rich range. In the local plain ware, there were kantharoi, jars, beaked jugs, loop-handled cups, small jars and two pyxides (~~See FIG. — for some types~~): one kantharos was apparently coated red inside, and one loop-handled jar had a whitish surface and was banded in red-brown matt paint. Several Grey Minyan kantharoi and small jars, and one ring-stemmed goblet were found: these were often grooved on the body. Eight graves contained copper or bronze weapons and tools, including a slotted spear, daggers and knives, and pairs of tweezers; many others had bronze ornaments, pins, beads, circlets, and in one case some copper tubes with decoration of repoussé dots. Some of the circlets were covered with gold leaf, others were made of gold or silver. Beads of carnelian, 'glass', one steatite ring, and clay whorls and spools were also found. (See Appendix for catalogue of richer graves, and FIG. 16 for some of the more important finds).

The Grey Minyan vases, the beads and probably the precious metals were imported. One of the daggers has the ogival MM III shape (see FIG. 16), another, with a triangular arrangement of rivets at the base, may have Aegean connections (See FIG. 16). The slotted spear was of

almost pure copper, like the example on Leukas, and was surely cast locally, since a mould for this very type was found on the site. Other weapons and tools contained varying amounts of tin, but all had enough to be considered deliberate bronze alloys:²⁵ the knives were of local types.

This range of imports and foreign connections, taken together with the evidence for a local metal-working industry, suggests that Sesklo was an extremely important site in MH times: it may even have been the centre of distribution for the slotted spear. It may have controlled the working of local copper ores, and ore may have been brought from the Othrys mountains, although there is no evidence that these were prospected and worked before the fourth century B.C.²⁶ The constant demand for copper seems to have made it worthwhile for Aegean and possibly mainland traders to travel to Thessaly; the imports, foreign influence and wealth displayed by the Sesklo graves provide the evidence for their presence. The rest of Thessaly remained comparatively poor, but was connected with the south by imports of Grey Minyan and 'Lianokladhi Matt-Painted': there seems also to have been some Cycladic activity. Although more provincial in its pottery than other parts of Greece, Thessaly is firmly tied to the MH culture by the appearance of apsidal megara and slab-built

25. The results of analyses of weapons, tools and objects are stated in Dhimini and Sesklo, 135, note 1, 136, note 2, 137, note 1, 140, note 1, 146, note 1.

26. Prehistoric Thessaly, 248; O. Davies, "Two North Greek Mining Towns", in JHS 49 (1929), 95-9.

cists, as well as by the connections between its pottery and the coarse wares of the south: but it is not at present possible to determine how the MH culture arrived there.

(5) The MH World (See MAP 8).

It is now time to summarise the evidence that has been presented and to attempt to draw some conclusions. For the MH period, as throughout the prehistoric period on the mainland, most is known of the provinces centring on the Isthmus of Corinth and the adjacent gulfs, the Argolid, Corinthia, Attica, Boeotia and Phocis. I have tried to suggest above that important evidence from other parts of Greece is being misinterpreted or ignored because of a tendency to consider the mainland's history from the point of view of these central provinces. However, the survey of local development should have shown how inadequate the evidence is outside them. The facts that we have do not allow any firm conclusions to be drawn, but they may be used to suggest new lines of approach.

I have argued that it is possible to derive the MH culture directly from the EH III culture of the Argolid-Corinthia. Some of the most basic elements of this culture, the domestic pottery, the megaron house-plan, and intramural burial in pithoi and cists, have been traced all over Greece from Thessaly southwards. It is therefore a justifiable assumption that variants of this culture spread to these areas; but the progress and chronology of this spread is completely obscure outside the central area. It seems to have been completed by the Angular Minyan phase, which, I have suggested (see FIG.2), began relatively early in the MH period, c. 1850 B.C.: it is also far better represented than the early phases, and the generalisations that I shall make are largely based on material of this and the Late Phase.

In the central area, the EH II culture had been not only prosperous, but apparently well-organised and in touch with comparable cultures of the Aegean and west Anatolia. It seems beyond dispute that the cultures which succeeded EH II were not as advanced and had only a rudimentary organisation, although they introduced one major innovation, the potter's wheel, and maintained overseas connections. Whereas the Cyclades and west Anatolia recovered from the period of trouble, probably connected with the arrival of new peoples, at the end of the EB II period, and while Crete was quickly attaining an even more splendid "civilisation", the mainland seems to have suffered a permanent set-back. The EH III peoples reintroduced the village-culture, and the mainland did not become even quasi-urbanised again until LH III.

The great majority of sites settled in the MH period had been previously inhabited: this is not surprising, for the economy of the EH III - MH population was based, like that of its predecessors, on agriculture and stock-breeding, and the same sites would appeal to them. A drop in the number of inhabited sites has sometimes been taken to indicate a real drop in population,¹ attributable to the violent arrival of new people. There may well have been such a drop in some areas: but, in the case of Laconia, it has been suggested that only the unimportant EH sites were not reoccupied,² while in

1. E.g., most recently, Prehistoric Euboea, 90.

2. Prehistoric Laconia II, 170.

Messenia there was a very considerable increase in the number of sites and a spread of population to less obviously favourable areas.³ Excavated sites have rarely shown evidence of a complete abandonment for a long period, although some seem to have lost their importance after EH II.⁴ It may be, then, that the smaller number of sites represents a consolidation of population.

In this connection, it may be relevant to note a pattern of settlement observed particularly in the Argolid and at Athens, where in place of a single nucleated settlement we find a group of small hamlets, very close to but separate from a major site, usually an acropolis. This pattern has only been observed at intensively excavated sites, but it may have been common. It may reflect a greater preoccupation with security than that felt by the EH II people. The common choice of an acropolis-site may be further evidence of this preoccupation, for, whereas in much of Greece these sites had been previously inhabited, in Messenia they had not, and were often notably steep and inaccessible.⁵ These may have been chosen because they were prominent, or because they were rocky, and therefore less overgrown and easier to clear than lower sites, but it does seem likely that their greater security was also a factor. In a newly-settled area, this probably included security from wild animals such as wolves;

3. Prehistoric Messenia III, 173-4.

4. E.g. Zygouries in the Argolid, Raphina and Aghios Kosmas in Attica; Askitaro in Attica apparently was abandoned.

5. Prehistoric Messenia III, 174.

but it would be wrong, in view of later history, to rule out a fear of human enemies.

Very few settlements have been excavated on a large enough scale to permit a reconstruction of their original appearance, but the evidence does suggest considerable differences between them. Where the site was a comparatively level area, rows of megara have been found, often varying in orientation: Lerna, Chasambali and Argissa are examples. But at such sites as Asea, Malthi and Olympia, houses are scattered with no trace of order. On more uneven sites, terraces had been constructed in the EH period, and these continued to be used: Asine and Berbati are good examples. The houses themselves differed in plan, particularly in the later period: by this time the vicissitudes of the settlements and of the history of individual houses had produced a more complex plan, of closely-packed houses separated by narrow, winding paved streets, as at Eutresis. Bothroi and burials were sited all over the settlement: at some stages there might be a recognised burial-area within the settlement, or it might contract in size and graves be dug where houses had previously stood. With the exception of the (probably late) fortified village at Malthi, there is no good evidence of fortifications. As in EH III, the construction of terrace-walls and paving of streets seem to be the highest forms of community effort.

The normal type of burial was a single grave for each dead person, and graves seem most often to have been dug in the settlement, or, in the case of small children, under the house-floor. The majority of

burials throughout the period had no goods, this being the rule even in the large cemetery of Sesklo; but some even of the earliest graves had goods, and there was a definite increase in the number of graves with goods in the Late Phase. It is doubtful whether any general conclusion may be drawn from the evidence, particularly since so many of the preserved graves are those of children.

The reuse of a grave, as opposed to the burial together of two or more persons, seems to have been rare throughout the MH period. The notable exception to this is the burial-tumulus. Some of these were only used for one burial, but it was more customary for there to be several, both of adults and children. This seems to be predominantly a feature of the west coast of Greece, and was found outside the true Helladic area, in Epirus and Albania. The EB tumuli of Leukas may have been the ancestors of all the types found: they provide prototypes for several features, such as an important central burial, the presence of burnt layers, and burial in large pithoi. It may be argued from the labour needed to build these tumuli, and the evidence of ceremonial connected with their construction or use, that these were the graves of important families. If so, one might expect to find more of them in central and eastern Greece: but it is possible that the societies of eastern and western Greece were differently organised.

The arts and technology of the MH people were of only moderate standard. Their houses were built of mud-brick on stone foundations, and, although sometimes built to a complex plan, did not require any

special architectural skill. The same may be said of the rare terrace-walls, possible fortifications, and the most monumental tombs, the tumuli. MH pottery had a wide range in the central area, and the fine wares were generally well-shaped and competently decorated: but the wheel seems to have been used almost exclusively to produce Grey Minyan, and many even of the late fine vases were handmade. In the Late Phase, considerable skill was shown in producing and decorating a wide range of small vases: this skill is most evident in the central area, particularly the Argolid-Corinthia.

The working of stone, bone and tusk seems to have been commonly practised in MH Greece. The characteristic stone arrowhead with two barbs (see FIG. 6) was produced both in local flint and chert and in imported, probably Melian, obsidian; this seems to be a mainland product, rarely occurring elsewhere,⁶ and the best examples were very finely worked. Bone was used for small tools, for pins with elaborate heads (see FIG. 15), and for other objects, including some beads, and the circle-decorated strip from Eleusis. The working of boar's tusks was widespread, for evidence has been found at Eutresis, Eleusis, and Asea; in each case the types produced were different (see FIG. 15), but all were various forms of flat plate, usually perforated for attachment. The evidence from Eleusis suggests that the plates there decorated a dagger-sheath and a tunic, corslet or pectoral. There is

6. H.-G. Buccholz, "Die Pfeilglätter aus dem VI. Schachtgrab von Mykene und die helladischen Pfeilspitzen", in JdI 77 (1962), 1-58.

no evidence that they were used for plating helmets at this period, but this was a common practice in the Mycenaean world. This skill, then, and that of making stone arrowheads, were carried on into LH times. None of these objects requires special skill to make, except possibly the arrowheads. We may note that there was very little attempt to produce ornamental objects, and none to produce figurines in any material: the MH people seem to have been distinctly utilitarian in this respect.

MH achievement in metallurgy was also relatively undistinguished: the picture is complicated by the rarity of material, the small number of analyses made, and the possibility that some of the best pieces, such as the Corinth head-band (see FIG. 15) and the Asine silver-plated knife, were imported. The best evidence for metal-working has been found at Sesklo, where several moulds and a probable crucible were found; another crucible and possible foundry has been found at Lerna. The graves of Sesklo and Leukas contain the great majority of MH tools and weapons and many of the smaller metal objects. The distribution of the 'shoe-slot' spear and various types of straight-backed knife with tapering edge strongly suggests that these are products of schools of metallurgy centred in north Greece, one probably at Sesklo itself.

With the exception of the spear and knife, the larger metal objects of the mainland show clear connections with Aegean, often Cretan, types. The tools include chisels, awls, pairs of tweezers and a saw; there are two basic types of dagger, one long and tapering, with two or three rivets in the base and often a rounded butt, and one

short and broad, with three rivets across a straight-ended heel. The latter is particularly common in late graves. An ogival dagger from Sesklo (See FIG. 16), and an ivory-handled tapering example from Prosymna, with five rivets along a rounded heel (see FIG. 15), have close Cretan parallels. A silver-plated knife from Asine may be an import, and is surely at least allied to a Cretan dagger in technique. A knife from the Aspis, with hooked point, may also be of Aegean origin.

There was also quite a wide range of personal ornaments, including dress-pins, earrings, hair-circlets and spirals, rings, bracelets, and beads: these were mostly found in graves (see Appendix). Most were made of copper or bronze: at Sesklo some unique tubes, made of copper plate beaten into a cylinder and decorated with repoussé dots, were found in T.25. They were presumably products of the local industry. The hair-ornaments seem to have been a mainland speciality, since they are very rare in Crete: they may originally have come from the Near East.⁷ They might be made of gold, silver or bronze wire; in some cases bronze examples were covered in gold leaf. Pins were fine and long, sometimes with ornate heads: they presumably derive at least in part from the local tradition of bone pins, but may also be related to the EB pins of the mainland and the Cyclades. Finer ornaments such as the gold head-band and silver armlet from Corinth, and the gold wire ornaments with

7. R. A. Higgins, Greek and Roman Jewellery (1962), 57, 61, notes a few Minoan examples; cf. 50, on Near Eastern parallels.

pendent spirals from Thebes, could be imports: they foreshadow the finery of the Shaft Graves, and might in fact be contemporary with the earlier jewellery in Grave Circle B and the products of the same artists.

The metallurgy of the mainland seems to have been in a rather rudimentary state. Very few analyses have been carried out; but it is noteworthy that the spearhead and chisel at Sesklo contained low percentages of tin, the former 1.7% and the latter 3%, that a dagger from Eleusis was practically pure copper, and that the spearhead from Leukas has also been described as of copper. Two daggers from Sesklo had 7% or more and the Aspis knife nearly 10%. The 'shoe-slot' spearhead would have been relatively difficult to cast, and even more so with such a low percentage of tin; this suggests that tin was in shorter supply in the north. The local smiths were clearly able to produce metal wire and gold leaf; the Eleusis dagger had rivets of silver, while the rivets of a Leukas dagger were silver-capped. The great pins also seem at present to be of local work. But it remains possible that many even of these less spectacular products were imported, for very little is known of Cycladic metallurgy at this period. The 'shoe-slot' spear and knife with tapering edge, however, almost certainly belong to a native tradition, and bear some witness to the ability of MH smiths.

Contacts between the Aegean and the mainland occur in all phases of the MH period. The evidence for these contacts consists of imported vases, obsidian, small quantities of precious metal, and beads in late graves, as well as the possibly imported, certainly Aegean-

influenced tools and weapons that I have just considered. The beads were made of semiprecious stones, such as carnelian and rock-crystal, which the mainland did not possess: others have been described as being of glass, or glass-paste. This is almost certainly wrong, since there is no evidence for a glass-industry in the mainland or Crete before the sixteenth century B.C. It is much more likely that they are of faience: indeed, examples from Aghios Mamas and Sesklo have been so described,⁸ and Higgins clearly refers to these when he mentions MH faience beads.⁹ They would then be very probably of Cretan origin, since there was a flourishing MM faience industry: but the Sesklo examples include some unusual shapes, that may come from the same source as the European beads.¹⁰ The 'Balkan' flasks from Lerna and Kirrha are the only definable imports that certainly did not come from the Aegean: Macedonian pottery may have found its way to Thessaly, and European raw materials may have come south, as I shall argue below. These foreign contacts were largely confined to eastern Greece: obsidian reached the west, but may have been traded from eastern Greece with the pottery found. The silver circlet and rivet-caps from Leukas Tumulus F, the only precious metal so far found in the west, must also have come from the east in some way.

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8. J.F.S. Stone and L.C. Thomas, "The Use and Distribution of Faience in the Ancient East and Prehistoric Europe", in ProcPS 22 (1956), 47, note 8 (Aghios Mamas); V.G. Childe, The Danube in Prehistory (1929), 283, note 2 (Sesklo).
 9. Higgins, op.cit. (supra, note 8), 54.
 10. Cf. Stone and Thomas, op.cit. (supra, note 9), 54-5, where Hungarian and Sesklo types compared; also compare Pl. 5, 1: third and first from right, with FIG.16.

The distributions of Grey Minyan and other characteristic wares of the central area, of 'Lianokladhi Matt-Painted', and of the 'shoe-slot' spear and Type 6b knife, are good evidence for lively internal trade. (See MAP 8). Grey Minyan also had a wide distribution overseas, as I have shown above,¹¹ including the Aegean islands, Knossos, Chalcidice and Troy in the east. It also appeared in the west: fine kantharos fragments have been found at Scoglio del Tonno and sites nearby, in the area of Taranto.¹² A piece of a ring-stemmed goblet has been found at Cucuteni in Rumania,¹³ and a fragment of what is probably an imitation Minyan kantharos at a site of the Bubanj culture in central Yugoslavia.¹⁴ The goblet-fragment was certainly wheel-made, but has a slightly odd appearance: however, at Eutresis, there were great variations in the number, shape and position of stem-rings;¹⁵ the kantharos-fragment may be paralleled from Cephallenia and Macedonia.¹⁶ These pieces raise certain problems, for the Italian

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11. Supra, (3) The MH Pottery Sequence, notes 31-3.
 12. F.G. Lo Porto, "Leperano", in Notizie degli Scavi 17 (1963), 329-33, and "Satyrion", in Notizie degli Scavi 18 (1964), 195-7; F. Biancofiore, Civiltà micenea nell'Italia meridionale (1967), 37-41, with Pls. 1, 2:a-b, e-l.
 13. H. Schmidt, Cucuteni (1932), 45, no. 4; Pl. 36: 1a-b.
 14. M.V. Garašanin, "Neolithikum und Bronzezeit in Serbien und Makedonien", in Bericht der römisch-germanischen Kommission 39 (1958), 63, Pl. 12:1.
 15. Eutresis, 136, figs. 183-4.
 16. BSA 32 (1931-2), Pl. 40:c; Prehistoric Macedonia, 179, no. 229, and perhaps 183, no. 258.

Grey Minyan pieces often seem to have appeared in levels of a much later date, together with LH III B-C pottery, while the Cucuteni sherd apparently came from a Neolithic level. The latter, however, must surely be out of context, and I find it easier to believe that the levels on the Italian sites were mixed than that Grey Minyan kantharoi continued to be made in the Late Bronze Age. They are quite certainly wheelmade, and therefore characteristic of the central area; and this is precisely the area where it is quite clear that Grey Minyan was already waning in popularity before the end of MH and where its characteristic shapes did not survive the transition to LH. A few probable Matt-Painted pieces have also been found in south Italy, the Aeolian Islands and Sicily:¹⁷ they do not bear a close resemblance to types of the central area, and may be products of west Greece or even local. Good parallels for the late Messenian shapes, the double-cup and bowl with internal handle, have also been found in Sicily and Lipari,¹⁸ adding to the evidence for a fairly strong connection between the West and MH Greece, and suggesting that both the central area and the west coast were involved in it.

But it is not enough merely to show that these contacts between the Aegean, the Greek mainland and the west existed: they must be explained. For the pottery, weapons and ornaments whose presence I

17. Biancofiore, op.cit. (supra, note 13), Pl. 2:c-d; Lord William Taylour, Mycenaean Pottery in Italy and the Adjacent Areas (1958), 13-14, 16, perhaps 54-6.

18. Bollettino di Paletnologia Italiana 43 (1923), Pl. 2:1 (Monte Sallia); BCH 84 (1960), 344, fig. 24 (Lipari).

have noted must surely be the by-products of trade, particularly in such relatively remote areas as Thessaly and north-west Greece: they indicate rather than explain a trade. There is an earlier parallel for this situation, for the EB tumuli of Leukas contained an astonishing quantity of gold and silver jewellery and copper weapons of varied origin. The earrings, beads and bracelets have Anatolian and Mesopotamian parallels,¹⁹ while the weapons show connections both with the Cyclades²⁰ and with Crete.²¹ Nobody seems to have remarked that Leukas is a surprising place in which to find such material: it was, no doubt, a fertile island, but from the point of view of the Aegean centres it is remote, and yet the much more central cemeteries, Aghios Kosmas, Zygyouries and Manika, do not contain such varied and rich material. This foreign interest in Leukas seems to have shifted to Epirus in the Middle Bronze Age, when slotted spears of Cycladic type, daggers with resemblances to early MM types, and MH 'shoe-slot' spears and knives, appeared in Epirot tumuli.²² This in its turn raises the problem of Sesklo: for its wealth and range of

19. Higgins, op.cit. (supra, note 8), 50-52.

20. W. Dörpfeld, Alt-Ithaka (1927) II, Pl. 63a:1-2, cf. C. Renfrew, "Cycladic Metallurgy and the Aegean Early Bronze Age", in AJA 71 (1967), 10.

21. Dörpfeld, op.cit. (supra, note 21), Pl. 63a:3-4; cf. K. Branigan, Copper and Bronze Working in Early Bronze Age Crete (1968), 13.

22. N.G.L. Hammond, Epirus (1967), 328-30, 337-9 (Vodhinë and Vajzë); cf. also "Tumulus-Burial in Albania, The Grave Circles of Mycenae, and The Indo-Europeans", in BSA 72 (1967), 79 (Pashok).

foreign contacts are far in excess of what one would expect.

I have already suggested a possible answer in the case of Sesklo, the control of a source of copper, and the same answer may be true of north-west Greece. Copper has certainly been found and worked in Epirus;²³ but central European metal may have come down to the Adriatic, and traders from the Aegean and the Near East may have come to buy it. Leukas was well situated to take toll of or even to control this trade, and I suspect that the R group of tumuli are the graves of leaders who made good use of this opportunity. The admittedly disputed evidence for Cretan, Cypriot and Syrian influence on Italian and Sicilian daggers could show how far this activity extended.²⁴ In the Middle Bronze Age, there is a concentration of Aegean and MH weapons in Epirus, and several graves in the Leukas tumuli S and F contain weapons and tools of Aegean and MH types, but there is no trace of material from the Near East: the link may have been broken at the end of the Early Bronze Age, but the Near Eastern connections of metal goods of the Central European Únětice culture²⁵ suggest that another route was being used. The Aegean traders and the local smiths of Sesklo seem to have continued to take an interest in this area: the appearance of Type 6b knives at Volimidia suggests that the Messenians, past whose shores the Aegean traders had to sail, were

23. Hammond, op.cit. (supra, note 7), 19, 266.

24. Branigan, op.cit. (supra, note 21), 12-15, 23-4.

25. M. Gimbutas, Bronze Age Cultures of Central and Eastern Europe (1965), 35.

beginning to take a hand, piratical or otherwise, in the trade.

Aegean activity in other parts of Greece, and MH interest in south Italy and Sicily, Chalcidice and Troy, may well be the result of a similar search for various raw materials, including metal, of which southern Greece had no local source. Melian obsidian, that was certainly valued in its own right, became widely distributed: it certainly reached Cephallenia²⁶ and possibly Epirus.²⁷ Fine timber, foodstuffs, animal-hides, and even slaves may have been among the commodities traded: silver was probably being mined near Thorikos by the end of the Middle Bronze Age. Many places may have been visited by traders largely because they were on the way to somewhere else. The picture is still extremely hazy, but it is certainly clear that Aegean trading activity around the mainland and MH activity overseas have been considerably underestimated; and it is surely probable that the search for some important commodity like metal, which was in constant demand, lies behind this activity.

Evidence from the Argolid, and particularly Lerna, makes it possible to say something of the MH people themselves.²⁸ They were exceedingly mixed in physical type, but generally short: the men of

26. C. Renfrew, J.K. Cann, and J.E. Dixon, "Obsidian in the Aegean", in BSA 60 (1965), 244, nos. 131-2.

27. Hammond, op.cit. (supra, note 7), 316.

28. J. Angel, "The People of Lerna" (summary), in AJA 62 (1958), 221; R.P. Charles, "Etudes anthropologiques des nécropoles de l'Argos", in BCH 82 (1958), 268-311, also publication of same name (1963); C. Fürst, Zur Anthropologie der prähistorischen Griechen in der Argolis (1930).

Lerna were rarely taller than 5ft.5 $\frac{1}{2}$ in., and the women than 5ft. $\frac{3}{4}$ in., and this seems to be above average; men from graves at Asine and Eleusis seem to have been even shorter, although the women seem much the same. At Lerna, the average age at death for those who passed the age of 15 was 36 for men and 31 for women, and the infant-mortality rate was exceedingly high. These figures seem rather low, for at Asine and Argos several men and women passed 40, even 45, and two men may have reached 60. The Lerna figures were based, however, on a far greater quantity of material: they may be so low through including several 'sub-adult' dead. The high rate of infant-mortality seems to have been general in MH Greece, to judge from the large number of infant burials found at most sites. It is instructive to compare these results with those from the MM II-III Ailias cemetery near Knossos.²⁹ Such evidence as could be obtained on heights suggested that the Cretans' height was about the same or only a very little more; but their average ages of death were much higher, 44-6 for men (based on 56 individuals) and 40-43 for women (based on 25 individuals). The reason for this may be that the Cretans were better fed; the pelvis development of the Lerna people suggested that they were somewhat undernourished.

They have been described as 'vigorous' however, and there seems no reason to doubt this. The quantities of boar's tusks found at several sites, and the occasional deer's antlers, suggest that they were enthusiastic and skilful hunters. It seems probable that this was

29. R.P. Charles, Anthropologie archéologique de la Crète (1965), 46-82.

the primary purpose of the arrowheads found widely on the mainland, although they and the metal spearheads, daggers and knives may occasionally have been used in warfare, for it seems unlikely that the warlike nature of the Early Mycenaean princes was an entirely new characteristic. The wide spread of Grey Minyan, often to areas not apparently visited by Aegean traders, suggests that at least some MH people were good sailors, and there can be little doubt that they knew their way about the coasts of Greece and the Aegean, and were familiar with the route west, by the end of the MH period.

The actual nature of MH society remains to be considered. No firm conclusions can be drawn about this: there is virtually no evidence for their religion or their social organisation. It is possible to infer that different societies may have existed side by side: the tumuli of the west, the weapon-burials of Sesklo and Leukas, the ornaments and beads of burials, particularly those of females, in the eastern mainland, and the development of family graves at Eleusis all hint at this. Society in general seems to have been fairly loosely organised: there are more traces of a "ruling class" in the poorer west than in the prosperous east. Before the rise of the Shaft Grave rulers, the Argolid-Corinthia and the rest of the central area may have been divided into many independent villages. These could have been controlled by the older, more experienced and more forceful men of each village, or by two or three important families, whose status might change over the years, even by some matriarch such as the one buried in the Drachmani tumulus; similar types of society were to be found on the

fringes of the civilised world throughout antiquity and persist even today. Larger coalitions, religious or political, cannot be traced in the archaeological evidence: but we may imagine the villagers of well-defined areas such as the Argolid-Corinthia, whose material culture was so similar, may have considered themselves to be related. It is not at all clear whether they would have felt the same about the people of Messenia or Thessaly: but there was enough contact between all these groups and enough similarity in their way of life to make it unlikely that they thought of each other as utterly alien.

APPENDIX: Important MH Grave-Groups(1) Argolid-CorinthiaLERNA

Grave H.1 (Caskey 1954, 21-2): Partly destroyed, pebble floor.

1 adult; vase, 2 crystalline objects, 4 beads and spiraliform fragment of 'glass-paste', fragments of 2 bone implements, 3 bone pins, 2 bone beads, 12 seashells.

Grave BA.3 (Caskey 1955, 36): Slab-built cist. 1 child: bronze ring, 1 'glass-paste' and 2 carnelian beads, clay jug-shaped bead.

Grave J.2 (Caskey 1956, 155): Cist, pebble floor. 1 adult extended on back, smaller contracted adult immediately above: 2 vases, 1 'glass' and 3 carnelian beads.

Grave BC.3 (Caskey 1956, 157): Large stone-built tomb. 2 vases on cover; centre emptied, refilled with fine earth; on patch of undisturbed floor, 2 vases. In fill, adult bones, fragment of bronze pin, 2 lead clamps from mended vases.

Grave DC.1 (Caskey 1957, 143-4): Stone-built tomb, with floor of clay and pebbles. 3 adults: vase between second and third, bronze pin.

PROSYMNA (Prosymna I, Ch.IV). Graves cut in rock, stereo and/or earth, unless otherwise stated.

Group II, Grave 20: Oval. Small skeleton: 12 vases, 63 pierced cockleshells, wristlet of 7 'glass' beads. Fragment of bronze pin in fill.

Group IV, Grave 4: Long and narrow; 4 vases on heap of stones and

earth on roof. Scattered bones; bronze dagger with ivory handle, pair of bronze tweezers.

Group V, Grave 17: Well-made, slab-roof on ledge cut in rock.

Few traces of bones: 2 vases, 4 seashells, 2 bronze loops, 2 bronze 2 rock crystal, 2 steatite beads, bronze-wire ring.

Group V, Grave 18: Roof gone. Few bone fragments: 5 vases, loop of bronze wire, 1 carnelian and several bronze beads.

Group V, Grave 26: Roof gone. Bones small, probably child: 4 vases, bronze-wire ring and pin, clay whorl.

Group VII, Grave 11: Built of small slabs, only one slab of roof left. 2 skeletons, probably woman and child: woman had bronze pin, clay whorl. Vase in earth above grave.

ASINE

T.4 (p.116): Built cist, under House E. 1 adult: vase, 2 bronze beads.

T.98 (p.126): Built cist, partly destroyed, pebble floor. Young woman: 1 vase, 2 bronze earrings, clay whorl, bone awl.

T.107 (p.258, with fig. 186 on p.268): Grave not described. 2 vases, silver-plated bronze knife, obsidian arrowhead.

BERBATI

U. Jantzen, in AA 53 (1938), 554, refers to one earth-cut grave with bronze dagger, another with vase, 11 obsidian arrowheads.

Å. Åkerström, "A Mycenaean Potter's Factory at Berbati near Mycenae", in First Mycenological Congress, I, 48.

"Shaft-Grave": Cist with pebble floor, apparently earth-cut, roof of 2 layers of clay separated by burnt earth. Adult male: 4 vases, bronze

dagger.

ZYGOURIES (Zygouries, 39-40).

T.1: Earth-cut, irregular oval, surrounded by single row of stones.

Adult: 2 vases, necklace of 19 crystal, 15 'paste' beads, coil and 2 circlets of bronze, clay whorl, bone pin.

CORINTH (C.W. Blegen, Corinth XIII: The North Cemetery (1964),

Part I, 1-12, particularly 2-4, 7-9).

All graves earth-cut pits, slab-covered, containing 1 adult.

Grave 2: 3 vases, silver armlet, 3 bronze hair-circlets, 2 bronze pins, bronze finger-ring, one red stone and several 'paste' beads, 2 pieces of silver wire, 2 clay whorls, clay spool.

Grave 3: Roof gone, vase near grave. Gold head-band, pierced silver object, 4 bronze circlets, 1 bronze and 3 'paste' beads.

Grave 5: Pebble floor. 4 vases, bronze dagger.

(2) Laconia

GERAKI (A.J.B. Wace, "Early Pottery from Geraki", in BSA 16 (1909-10), 72-5). Slab-built cist. 1 burial: 2 vases, long bronze pin.

AGHIOS STEPHANOS (Lord William Taylour, "Laconia: Aghios Stephanos", in Deltion 19 (1964) B, 146-7).

Cist. Woman: 5 vases, long bronze pin, bronze earrings, necklace of carnelian beads, bronze-wire bracelet, bronze finger-ring.

(3) Messenia

VOLIMIDIA (S. Marinatos, in Praktika 1964, 86-9).

Kephalovryso T.1: Constructed within rock-hollow, one wall and roof of slabs, ? also beams in roof. 2-3 earlier burials at one side, latest in centre, all adults. Goods of earlier burials include 5 vases, 1 bronze knife; of last burial, over 20 vases, 3 bronze knives, 41 flint arrowheads, flint slab and flakes, whetstone, small boar's tusk plate, 1 steatite and 3 clay whorls.

(4) North-West Greece

LEUKAS (W. Dörpfeld, Alt-Ithaka (1927) I, 207-13 (Tumulus S), 213-7 (Tumulus F)).

All burials in slab-built cists.

T. S.4: Adult male: 2 vases, bronze saw, 3 bronze chisels, 9 flint arrowheads, 2 whetstones, 2 'arrow-polishers', 2 boar's tusks.

T. S.8: Adult male: 5 vases, 3 pierced bronze objects, bronze dagger, 2 bronze chisels, 20 flint arrowheads, flint borer.

T. S.9: Bone fragments: 4 vases, bronze knife.

T. S.10: 2 disturbed adult burials, vase, bronze knife.

T. F.5: 2 adult females: 2 vases, 1 silver, 1 bronze earring, agate bead.

T. F.7: Adult male: copper spearhead, bronze dagger with silver-capped rivets, small agate bead, clay whorl, sherds.

(5) Attica

ELEUSIS

T.6 (Eleusis, 53-7): Slab-built cist. Small adult male: copper dagger

with 3 silver rivets, decorated bone strip, over 50 pierced boar's tusk plates.

T. 4 (G. Mylonas, in Praktika 1952, 64-6): Large stone-built tomb, with broad entrance in one side. Original MH burials put in pit below floor: goods included vases, rock crystal and bronze beads, sealstone.

T. 8 (G. Mylonas, in Praktika 1955, 67-8): Slab-built cist, pebble floor. Child: 5 bronze circlets covered with gold leaf, clay whorl.

ATHENS (K. Kübler, "Ausgrabungen in Kerameikos", in AA 51 (1936), 197-8, with figs. 18-19 on 205-6).

Largely destroyed grave. 3 vases, bronze bracelet, clay whorl.

APHIDNA (S. Wide, "Aphidna in Nord-Attika", in AthMitt 21 (1896), 391-4).

Grave 2: Slab-built cist, pebble floor, previously opened. Knife and arrowhead of obsidian.

Grave 3: Pithos-burial, closed by limestone slab, bowl nearby.

Adult?: at least 6 vases, 6 gold, 1 silver circlets.

(6) Central Greece

THEBES (S. Marinatos, in AthAA 1 (1968), 11, 16-17).

Half-destroyed grave, ? slab-built cist. Vases, carnelian beads, gold wire ornaments with pendent spirals.

EUTRESIS (Eutresis, 225).

T. 6: Earth-cut. Adult: 1 vase, necklace of carnelian beads.

ORCHOMENOS (Orchomenos I, 62, 64, 65: T. 43 might be later).

T. 10: Built of mud-bricks. Child: 2 bronze spirals.

T.31: Built of mud-bricks, roofed with slabs over mud-bricks.

Child: 1 bronze spiral.

T.43: Built of mud-bricks. Child: necklace of small 'glass' beads.

KIRRHA (Kirrha, 124).

Sector A, Grave 56: Slab-built cist. Woman: vase, 2 gold spirals.

Sector A, Grave 57: Slab-built cist. 2 males: steatite whorl, gold spiral.

Sector A, Grave 58: Slab-built cist. 2 adults: 1 has vase, full of round seeds, gold spiral, steatite whorl.

(57 dated MH because of proximity, parallel goods to 56 and 58).

(7) Thessaly

SESKLO (Dhimini and Sesklo, Ch.III, 125-56).

Type of grave not always stated in detail, but all cists, built of slabs, stone or mud-brick. Burials apparently mainly adults.

T.7: Vase, 2 bronze circlets covered with gold leaf, clay spool.

T.17: Vase, bronze dagger.

T.22: Vase, bronze dagger with wood handle, pair of bronze tweezers.

T.25: Largest in cemetery: 3 burials, apparently man, woman and child.

1 vase; man's goods, bronze dagger and knife, wavy piece of bronze plate; woman's goods, 3 gold, 5 bronze circlets, piece of bronze plate, bronze pin, steatite ring, necklace made up of 'glass' and bronze beads and copper tubes, 2 semicircular pieces of gold leaf, clay whorl.

T.28: Vase, 4 silver and 2 bronze circlets, 1 white stone and 11 carnelian beads.

T.29: 2 vases, copper chisel.

T.32: Built of mud-bricks, with slab roof. Vase, pair of bronze tweezers.

T.38: 3 burials: one has vase, bronze circlet, steatite ring, clay whorl.

T.40: Vase, silver circlet, pair of bronze tweezers.

T.41: Vase, 3 silver circlets, clay whorl.

T.43: Vase, 10 white stone beads, 'glass' beads.

T.50: Vase, bronze knife.

T.53: 4 burials: 2 vases, bronze circlet, clay whorl and spool.

T.56: 2 vases, copper spearhead.

DHIMINI (Reference as for Sesklo)

T.61: Vase, necklace of 4 silver and 25 carnelian beads, 2 bronze circlets, covered with gold leaf, clay whorl.

ZERELIA (Prehistoric Thessaly, 161)

Grave F: Slab-built cist. Male: bronze knife, flint arrowhead, bored stone celt.

Chapter III

THE SHAFT GRAVES

(1) Introduction

The Shaft Graves excavated by Schliemann and Stamatakis at Mycenae were the first Mycenaean remains of any significance to be discovered, and their contents are still the most spectacular products of the Mycenaean world. Ever since the framework of Aegean prehistory began to be apparent, they have been the principal evidence for one of the most significant cultural changes on the mainland, from the comparatively poor and unremarkable MH culture to the splendid if barbaric Mycenaean. These graves mark the acquisition by Mycenae of power which it retained to the end of the Bronze Age, and they represent the tombs of its first rulers. Inevitably, the suddenness of their appearance has led to the suggestion that these rulers were of foreign origin, but for a long time it has been maintained that they were natives of the mainland. The excavation of a second group of shaft graves at Mycenae in 1951-4 gave support to this view: these proved to be smaller, older and poorer, which seemed to suggest that the transition from MH to Mycenaean and the rise of the 'Shaft Grave Culture' were not abrupt but gradual. The new graves also provided much evidence about the construction and use of a shaft grave, which had not been clear from the earlier excavations.

The pottery of all but a few of the new graves was completely MH. This, and the apparent coexistence of shaft and cist-grave, has strengthened the view that the shaft grave was developed from the MH cist, and has made it possible to see this development as a phenomenon of the transition from MH to Mycenaean. Combined with recent discoveries of almost equally early date elsewhere in Greece, this has led to a theory that the Mycenaean culture was produced by the reaction of Cretan influence on a growing MH prosperity. I think that this both overestimates the unity and prosperity of the MH culture and the capabilities of the mainlanders, and underestimates the Cretan contribution. So far, phenomena parallel to the Shaft Graves have not been found in many parts of Greece: rather, the Argolid seems to have been the source of many of the influences that made up the Mycenaean culture elsewhere, and other provinces were dependent on its lead. An understanding of the Shaft Graves, therefore, remains crucial to the understanding of the beginnings of Mycenaean culture.

A foreign origin for the Shaft Grave rulers continues to be canvassed by those who cannot see their wealth as a natural development of MH prosperity. Such theories have generally been based rather on certain remarkable objects found in the graves than on the complete range of their contents. Moreover, the problem of why such foreign rulers should choose to settle at Mycenae, or, indeed, anywhere in MH Greece, has been generally ignored. It may be pointed out that a similar difficulty is involved in theories of their local

origin: Mycenae is not an obvious site from which to dominate the Argolid, and it does not seem to have been as important as many other sites in the Argolid before the rise of the Shaft Grave rulers. The theory of local origin, moreover, has never really adequately explained the startling access of new wealth. Only a thorough analysis of the Shaft Graves and their contents can make the picture any clearer.

MH remains at Mycenae are scanty but widespread¹ (See MAP 9). Tests under the Palace on the acropolis produced MH pottery, but no trace of structures. The Prehistoric Cemetery area, which stretched along the western and south-western side of the acropolis, contained some traces of houses,² but was mainly used as a cemetery, clearly because of the softness of its rock. To its west is the Perseia Fountain House area, where there were traces of houses but only one or two possible graves. This separated the area of Grave Circle B from the Prehistoric Cemetery, making it clear that the former was a separate burial-area. Both in and around Circle B, traces of houses were found:³ fragments of a Matt-Painted bowl and water-jar, of early style, came from the remains within the Circle. Traces of MH settlement have also been found in the area of the LH IIIB houses south of the Tomb of Clytaemnestra and on Kalkani hill. A possible settlement on the Panaghia ridge, maybe centring on the Epano Pegadhi

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1. Supra, Chapter II (4) (i) The Argolid-Corinthia, note 75.
 2. Mycenae (BSA 25), 117.
 3. J. Papadimitriou, in Praktika 1953, 219-21, 1954, 242-4, 263-4; ILN, Mar. 6, 1954; G.E. Mylonas, Ancient Mycenae (1957), 153-5.

spring, is suggested by small quantities of MH pottery found in the excavation of the Cyclopean, Epano Phournos and Panaghia tholoi, and of chamber-tombs on the slope opposite Kalkani hill. One piece of Grey Minyan was even found in the dromos of T. 505, well to the south: but this may be a stray, for in the area of the House of Lead, at the southern end of the ridge that contained the Treasury of Atreus and north of T. 505, the first traces of habitation belong to the beginning of the Late Helladic period.⁴ The settlement on Kalkani hill seems to date from the EH II period: the others may be offshoots of the main site on the acropolis, spreading progressively westwards.

The Prehistoric Cemetery area was used for burials from the MH period to at least LH IIB. Many are shallow pits, containing small children without goods, and cannot therefore be closely dated. But some burials in jars are probably early in MH, some adults' burials had rather poor pottery of the Late Phase,⁵ and some of both contained LH II vases. There is some Late Phase pottery of good quality from deposits in this area and from the acropolis,⁶ but, although the evidence suggests that Mycenae was a well-populated centre, nothing would lead us to suspect the wealth and importance apparent in the Shaft Graves.

4. A.J.B. Wace, in BSA 51 (1956), 120.

5. SG, Pl. 166:157-60; A.J.B. Wace, "The Arrival of the Greeks", in Viking 18 (1954), 215, fig. 3.

6. BSA 45 (1950), Pl. 24:a; A.J.B. Wace, Mycenae, an Archaeological History and Guide (1950), Pls. 94:a-i, 97:b-c.

Apart from the burials within Grave Circles A and B, other probable shaft graves and rich burials have been identified in the Prehistoric Cemetery area.⁷ When datable, these belong to the LH II period, that is, after the Shaft Graves; since the area of the two circles was not full at the time that burials in them ceased, this suggests that such burials need not necessarily be placed in circles, and that there was something special about those that were. First of all, then, it is necessary to examine the evidence for the perimeter walls of the two grave circles.

A considerable stretch of the Circle B wall survives on the north and north-east, a short piece of the inner face on the south-east, and fallen stones from it have been identified on the south.⁸ The construction of the Tomb of Clytaemnestra and of the modern road between the village and ancient site were probably responsible for the destruction of the rest. The wall is made up of two faces of large roughly-dressed stones, with a filling of pebbles and earth, on a foundation-layer of small thin flat stones. Mylonas states that it was originally 1.55 m. thick and 1.20 m. high. Pieces of Grey, 'Black' and Yellow Minyan and Matt-Painted were found in the wall, giving a rough terminus post quem; but without further publication this is not much help, for, since the area was not

7. A.J.B. Wace, in BSA 45 (1950), 206-7, 210-11 (T.3), 214-5 (T.8), 48 (1953), 7-9.

8. Mylonas, op.cit. (supra, note 3), 130-31; Mycenae and the Mycenaean Age (1966), 97-8.

inhabited after middle MH, a wall could have been built here at any time and still have contained MH sherds only. The wall's existence was either unknown to or ignored by the builders of Tomb Rho in the middle fifteenth century B.C., who destroyed one tomb and disturbed others. The construction of the Tomb of Clytaemnestra must have destroyed part of the perimeter wall, and its mound would probably have covered the whole circle: it is arguable that hardly anything can have been visible by then, or one might expect a cleaning-up operation like that in Circle A.

There remain three possibilities: that the circle was constructed before any burials were made in the area; that an area already used for burials was turned into a special precinct, as happened in the case of Circle A, or that the wall was constructed after the burials were made. Although the first alternative is generally preferred, I do not believe that it is necessarily correct. The earliest graves were very small and poor, and several were broken into by the construction of later graves: moreover, separate groups of them are to be found at opposite ends of the circle, whereas one would expect them to be concentrated in one area or evenly spread. If the circle is planned without these graves, it has a much less cluttered and more ordered appearance (see FIG.17). Against this there is the point that nearly all the graves are of the same type, as I shall show, suggesting that all belonged to the same group or class of people. The third alternative is probably least likely, for there is no reason for burials to stop in Circle B, leaving it partly empty, when they

continued in Circle A. I do not think that the evidence is conclusive, but prefer the second alternative.

There is not very much evidence for a wall around the area of Circle A. The surviving wall was certainly built in LH IIIB, at the time of the renovation of the Circle:⁹ it has been argued that this must have followed the line of an earlier wall, of which part has been identified on the west side, and the line has been traced on the north-west, marked by cuttings in the rock.¹⁰ The piece of walling was of rough style, and contained small MH sherds: it may well have been a terrace-wall in fact, constructed to hold in a levelling fill, for the rock sloped steeply here.¹¹ But this does not preclude its having originally been the substructure of a wall: this would, however, have had to run outside the surviving one, as the cuttings in the rock suggest, for the surviving one crossed, or at least went very close to, Graves VI and V,¹² and it is unlikely that these graves would, or could, have been constructed so close to an already existing wall. The presence of a wall would help to explain why this area was never encroached upon, and was carefully treated during the LH IIIB

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9. Mycenae (BSA 25), 105-12; Mylonas, op.cit. (supra, note 3), 116-8.
 10. Mylonas, op.cit. (supra, note 3), 104-5; (supra, note 7), 91; cf. Mycenae (BSA 25), 123, for earlier wall. For cuttings, J. Papadimitriou, in Praktika 1957, 106; G.E. Mylonas, in Praktika 1961, 159-60.
 11. Mycenae (BSA 25), Pl. 17.
 12. Cf. Schliemann's original plan, Mycenae and Tiryns, Plan B, for Grave V; Mycenae (BSA 25), Pl. 1, for Grave VI.

building operations; moreover, the six graves enclosed do form a group, for the burials seem to have been consistently oriented with heads to the east except in IV, where two burials were laid with heads to the north,¹³ and VI, where the orientation is not known but can only have been to east or west, from the shape of the grave.

Before the discovery of Grave Circle B, it was easy to describe Circle A as the burial-ground of Mycenae's first 'royal family', and a rough sequence was worked out, making Graves VI and II the earliest, then IV and V, and finally III and I.¹⁴ This sequence is too schematic, for it puts most of the women's burials after the men's, and ignores the virtual certainty that these graves were used more than once. Some of the graves of Circle B were certainly earlier than these, but others, including the larger and richer ones, must have been contemporary with them. It has been suggested that these are the graves either of another branch of the 'royal family', or at any rate of members of it,¹⁵ but this view has difficulties. If the burials were all of one family, why were the two circles so far apart, or if of two families, why were the graves of Circle B consistently poor compared to all but VI and II of Circle A? In fact, the remains of the bodies do not show a marked 'family resemblance' even in Circle B: they were remarkably varied, although they showed a general

13. Mycenae and Tiryns, 155, 164, 213-4, 291, 295; cf. SE, 36.

14. Mylonas, op.cit. (supra, note 3), 124.

15. Mylonas, op.cit. (supra, note 7), 109.

superiority in height and size to the MH average.¹⁶ It seems more likely that Circle B was set apart for the most important retainers and warriors, an early 'aristocracy'; the uniformity of superior physique, and, as I am about to show, of grave-type, suggests that 'kings' and retainers formed a closely linked group.

It has been customary, following Mylonas, to divide the graves of Circle B into shaft and cist graves:¹⁷ the basic criterion appears to be depth, for Mylonas has described Graves Zeta, Eta and Theta as "comparatively small shafts (one could call them cists)".¹⁸ Mylonas also believed that they were developed from the MH cist, parallel to the great built graves of Eleusis but different from them because of differing local conditions.¹⁹ However, a somewhat loose application of the term 'shaft grave' has obscured two essential differences between the Mycenae shaft graves and other MH grave-types. The late MH cist was cut either in rock, or partly in rock and partly in earth or hard clay, and was roofed at its mouth by stone slabs, usually laid over the grave but sometimes fitted to a ledge on the lip. The Mycenae shaft grave, deep or shallow, had a roof of beams, usually covered with clay, supported some distance above the floor on ledges cut in the rock or on built walls; the rest of the shaft was filled

16. J.L. Angel, "Kings and Commoners" (summary), in AJA 61 (1957), 181.

17. Mylonas, op.cit. (supra, note 3), 131.

18. Mylonas, op.cit. (supra, note 3), 143.

19. Mylonas, op.cit. (supra, note 7), 110.

with earth, and a small mound, usually held in by stones and sometimes crowned by a marker or stele, covered the mouth of the shaft²⁰ (See FIG.17). The characteristic ledge in the rock for the roof-beams to rest on was found in one of the shallowest graves, Zeta, half-way up its depth of 60 cm.,²¹ and was noted in nearly every grave by Papadimitriou in his preliminary reports:²² apparent exceptions are Graves Eta and Pi, but the former had a mound over it and the latter had been disturbed.²³

It is not possible to find certain examples of this grave-type anywhere else. The two large built graves of Lerna²⁴ were certainly constructed at the bottom of a deep shaft, but were cut not into rock but into the mound made up of previous settlements. The contents of these graves were removed early in the Mycenaean period, for the shafts of both were filled with rubbish of that period, mostly pottery and animal-bones. Shaft 1 had been very carefully emptied, and was sealed at the level of the top of the walls by a layer of clay; in Shaft 2, two very late MH vases²⁵ were found in one

20. Cf. for example the description of Grave Beta by J. Papadimitriou in Praktika 1952, 436-7, and of Graves Zeta and Eta, 464-5.

21. J. Papadimitriou, in Praktika 1952, 464.

22. See Appendix (1) Grave Circle B, for full references.

23. J. Papadimitriou, in Praktika 1952, 464-5 (Eta), 1953, 231, (Pi).

24. Caskey 1955, 32-4, 1956, 155-7, 1960 B.

25. Caskey 1956, Pl. 39:d-e.

corner, and some human bones and bronze fragments were found on or above the floor. The emptying of these tombs may be compared with that of Lerna Grave BC.3, a late MH built grave, some way to the west;²⁶ this was less carefully done, but the roof was replaced and covered with clay, and two late MH vases placed on it. It seems likely that these were earth-cut shaft graves, later than the first examples at Mycenae and probably imitating them; their contents seem to have been moved rather than plundered, possibly for reburial elsewhere.

The 'shaft graves' at Berbati, Peristeria and Pylos, on the other hand, bear no resemblance to the Mycenae type. That at Berbati²⁷ was an earth-cut cist with a peculiar roof made up of clay and earth layers: in the absence of traces of a wooden structure supporting this, it would be unwise to assume its presence, and such a wooden structure would form the only link with the shaft grave type. The alleged grave at Peristeria²⁸ was a shallow oval cutting in the rock, which seems much more likely to have been connected with Tholos 3, as I shall argue in Chapter IV; there were no traces of a ledge. The Pylos grave was found under a floor of the Palace:²⁹ it had been robbed and was not closely datable. Again, there were no traces of a ledge: it seems to have been a small built tomb, about 1.50 m. long

26. Caskey 1956, 157-8.

27. Å. Åkerström, "A Mycenaean Potter's Factory at Berbati, near Mycenae", in First Mycenological Congress, I, 48.

28. S. Marinatos, in Praktika 1965, 116-20, and "Problemi archeologici e filologici di Pilo", in SMEA 3 (1967), 12-13.

29. Pylos I, 312-4.

by 1 m. wide and high, that was probably roofed by slabs at its mouth.

A much larger tomb of LH II date on the island of Scopelos has been compared to the Shaft Graves.³⁰ Its walls were over 2.50 m. long and 55 cm. high: slabs found inside it were probably from the roof. There is no evidence that this was reached by a shaft or roofed by beams: it was probably a large built grave of the type found in central Greece throughout the Mycenaean period.³¹ Finally, the 'shaft graves' of the Zafer Papoura cemetery at Knossos do bear a resemblance to those of Mycenae.³² They were reached by a deep shaft and roofed by slabs resting on ledges left in the rock. But they were small, rarely over 2 m. long and never over 80 cm. wide, always contained a single burial, and do not date from before LM II: it is therefore difficult to see a direct connection with the shaft graves of Mycenae, but not impossible. The burial-customs at Knossos in the LM I period are not well enough known for the origin of the types of grave prevalent in the Zafer Papoura cemetery to be clear.

The theory that the Grave Circles were in fact burial-tumuli, first proposed by Tsountas,³³ has recently been revived by

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30. N. Platon, "Ὁ τάφος τοῦ Σταφύλου καὶ ὁ Μινωικὸς ἀποϊκισμὸς τῆς Πεπαρήθου", in KC 3 (1949), 534-73, especially 544-6, 556.
31. E.g. Kirrha, 119 (T. 24), 121 (T. 35); J. Constantinou, in Deltion 19 (1964) B, 223 (Medeon); Thorikos I, 41-6.
32. A.J. Evans, The Prehistoric Tombs of Knossos (1906), 11-15.
33. C. Tsountas and J.I. Manatt, The Mycenaean Age (1897), 106-12.

Hammond.³⁴ He believes that tumulus-using chieftains of the central European Kurgan culture moved into Albania and western Macedonia in the Macedonian Late Neolithic period, which, following Heurtley, he makes overlap with EH I, and that some of these spread south by sea, appearing in Leukas in EH II, at Lerna at the end of EH II, in Messenia in the MH period, and finally at Mycenae c. 1700 B.C. This theory is based in the first instance on parallels drawn by him between the burial-customs in Albanian tumuli and the Shaft Graves, extending to the warlike nature of the goods found with burials and the pebble floors of the graves.

Chronologically and culturally, this theory has several fundamental defects, and it rests to some extent on misunderstanding of the evidence and on unprovable assumptions. First, the Kurgan peoples characteristically buried their dead in timber huts or graves lined with timber, sunk below the ground and covered by an earth mound.³⁵ Until the use of timber to roof the shaft graves at Mycenae, it does not appear as a material at all in burials of Greece or Albania; and to assume that the graves in Albanian tumuli were covered with wood because there is no trace of any other material is not only rash, but ignores the possibility that they were simply filled in with earth. In fact, the Leukas R tumuli are the earliest datable

34. N.G.L. Hammond, "Tumulus-Burial in Albania, The Grave Circles of Mycenae, and The Indo-Europeans", in BSA 62 (1967), 77-105; Epirus (1967), 341-5.

35. M. Gimbutas, The Bronze Ages Cultures of Central and Eastern Europe (1965), 20, 259.

examples in this area, and they are completely different from Kurgan types, being heaped over graves set in circular stone platforms, either pithos-burials or built cists. The early Messenian examples also contained pithos-burials, thus differing from the Albanian ones that only held inhumations or slab-built cists. Moreover, the dating of the Albanian examples is by no means clear: from the finds published or mentioned by Hammond, it seems most likely that the earliest are contemporary with the Late Phase of MH.

The identification of the tumulus over the House of the Tiles at Lerna as a burial-tumulus is simply a mistake, for houses were already being built onto it by the second phase of the EH III settlement and completely covered it by the end of EH III.³⁶ The large graves that I have already discussed were merely sunk deep in settlement-strata. Parallels between the Shaft Graves and burials in the Albanian tumuli are difficult to sustain: the latter were sunk in the earth of the tumulus except for the primary burial, a shallow grave not far below the surface, while the Shaft Graves were never less than 60 cm. below the surface and usually much more. The shallow graves of the Albanian tumuli, even if roofed with wood, provide no parallel for the shaft grave, that is really a chamber constructed in the lower half of a shaft. It would be very difficult to construct such a grave through a tumulus, and well nigh impossible to reuse it: it seems unlikely anyway that their roofs could have withstood the

36. Caskey 1966 B.

weight of the shaft-fill and the tumulus.

Other difficulties may be adduced. It would be surprising for the builders of Tomb Rho and of the Tomb of Clytaemnestra to have broken into and partly destroyed a conspicuous tumulus, and it would be difficult to explain the reconstruction of Grave Circle A, unless one assumes that the whole tumulus was rebuilt. One might then argue that the wall was not strong enough to retain a tumulus, that its entrance was useless, and that the positions in which Schliemann found the re-erected stelae, under much soil and more or less directly above the graves, would not fit this hypothesis. For, if the whole tumulus was covered by later wash, one would expect both them and it to have been disturbed.

There remains the argument that there is nothing in the contents of the west Greek tumuli or the Shaft Graves to suggest an Albanian origin for their occupants. Hammond has cited the greater height of the Shaft Grave men,³⁷ but he has not shown that the ancient Albanians were tall men. The parallels that he adduces between the pottery-types are not legitimate:³⁸ for the kantharoi and loop-handled cups of the Shaft Graves belong to the Minyan and Matt-Painted traditions and owe nothing to Albania, and the Vapheio cup of the tumulus at Pazhok is a LH IIA import, and therefore a 'collateral descendant' of the cup in Grave Lambda. The comparison between the

37. Hammond, op.cit. (supra, note 34), 345.

38. Hammond, op.cit. in BSA (supra, note 34), 91.

groups of weapons is positively misleading, for it completely ignores the fact that all these weapons can be shown, and are admitted by Hammond himself, to be imports from the Aegean: in no case can they be shown to be earlier than their counterparts in MH Greece or the Shaft Graves. Finally, the theory is open to the objection already raised to all theories deriving the Shaft Grave rulers from elsewhere. In short, I do not believe that this theory has anything to recommend it.

In the rest of this chapter, I shall first of all give a short description of the two grave-circles and their contents; a full summary list of the contents of the richer graves of Circle B and those of Circle A is in the Appendix. I shall then consider separately the most important classes of finds, such as the stelae, weapons, precious vases and ornaments, and will finish with a general discussion.

(2) Grave Circle B (See Appendix (1), and FIG.17)

The graves of Circle B may be divided into several groups chronologically and stratigraphically. Quite a number had been disturbed by the construction of later graves or in other ways: these probably included the earliest. Others that were small and poor may date from before the construction of the circle. I shall consider all these together first.

A group in the south-east includes some of the earliest graves known.¹ Papadimitriou suggested that these were surrounded by an earlier wall, but this is more likely to have been a house-wall, since it was nearly straight, and several traces of habitation were found in this area. All the graves seem to be true shaft graves. Graves Lambda.2 and Phi contained small handmade Matt-Painted vases of early Late Phase type: the former held the burials of an adult and a boy, the latter a disturbed burial. Grave Sigma contained only the skeleton of a large man; Grave Tau had been emptied, but was deep, with walls of mud-brick and a pebble floor. All of these but Sigma seem to have been disturbed during the construction of Grave Lambda. Another grave, Lambda.1, presents a problem. It was small and contained only one skeleton, with two vases: its southeast corner opened into the west side of Grave Lambda, and Mylonas believes that the central burial of Lambda was robbed through this hole.² But this

1. J. Papadimitriou, in Praktika 1954, 259-60, 261-3.

2. J. Papadimitriou, in Praktika 1953, 219; G.E. Mylonas, in Ancient Mycenae (1957), 156; Mycenae and the Mycenaean Age (1966, 105-6.

theory has difficulties. A bichrome vase from Lambda.1 is decorated in black and brown on a whitish ground,³ a style which I believe to be earlier than the red and black on fine buff style, to which several vases from Lambda itself belong.⁴ I know of no evidence that would allow as late a date as 'early LH I', which Mylonas suggests.

Moreover, it seems extremely improbable that such a robbery could have been carried out with impunity, and even more improbable that the robbers should have overlooked a fine group of weapons along the west side of the grave, almost underneath the hole, and the gold ornaments of an earlier burial, pushed against the east side. I therefore believe that Lambda.1 was an earlier grave than Lambda; it belongs, however, to a later phase than the group just considered.

In the east, one grave, which probably had rock-cut ledges along the sides and brick-built walls at the ends, was almost completely destroyed during the construction of Grave Rho:⁵ its burials were apparently moved to a pit cut in the rock nearby, together with some vases, and covered by slabs. In the north-east, the construction of Grave Alpha seems to have disturbed two earlier shaft graves:⁶ in one, the skeleton of a large man was found, his head having been lost in the construction of Alpha. The other, a deep grave, had been

3. Praktika 1953, 219, fig. 9: left.

4. Praktika 1953, 218, fig. 8: right, 219, fig. 9: right; Ancient Mycenae (1957), fig. 81: left.

5. J. Papadimitriou, in Praktika 1954, 247-8.

6. J. Papadimitriou, in Praktika 1953, 211-2.

emptied; a skeleton found between Graves Alpha and Delta may have belonged to it. Finally, Grave Pi in the north-west, apparently not a shaft grave but a rock-cut cist, contained the extended skeleton of a youth or small man, three Yellow Minyan goblets and a plain jug, and Grave Xi.1, a simple inhumation found near the ground surface, whose shape had been lost, was that of a child, provided with four small vases of the Late Phase, comparable to examples from the Prosymna cemetery.⁷

Another comparatively early group was found in the northern part of the circle. These may fairly be described as warrior-graves: each contained a male with a weapon and several vases. Three of these, Zeta, Eta and Theta, were small and shallow.⁸ Theta had been destroyed by the modern construction of a water-pipe, but several vases and a dagger were reported to have been found in it. In Eta, the man was buried with his head to the north-west, in a contracted position, and provided with a short broad dagger, of the type often found in late MH graves (see FIG.16), and five vases: I have already noted that this may not have been a shaft grave, although on the whole the descriptions suggest that it was. Zeta was certainly a shaft grave, and its construction and contents are of considerable interest. It had been cut into an earlier deep cutting in the rock, and its west end, which opened onto this, was made of mud-brick. It was only 60 cm.

7. J. Papadimitriou, in Praktika 1953, 231.

8. J. Papadimitriou, in Praktika 1952, 461-5.

deep, but had ledges along its long sides 25 cm. from the mouth; in each corner of the floor was a hole for a vertical beam, which was presumably intended to help support the roof. In it was the contracted skeleton of an extremely large man, over 1.80 m. (about 5ft.11in.) tall, with his head to the east; in front of him lay a very long Type A sword with an ivory pommel and seven vases, one of which, a coarse incised spouted jug, may have been a Cycladic import. This is probably the earliest sword to have been found on the mainland; wielded by a man who was a giant by MH standards, it must have appeared extremely formidable.

Grave Beta was some way to the east of these graves, and was one of the first large shaft graves.⁹ It was rock-cut, with brick walls along the short sides, and, like Grave Zeta, it had post-holes in the four corners. It was large enough for the occupant to be extended on his back; five vases were behind his head, two at his feet. A dagger was found lying on his right elbow, a gold or electrum band around his left arm, and two gold bands on his right hip. This man was 1.80 m. tall; his dagger was large and ogival, of a type that was to become popular (see FIG. 19). The vases included a holemouth-jar with complex Matt-Painted decoration, and a fine jar with plant-decoration around the belly that is either an import from Phylakopi or a local product in the same style.¹⁰ Of the gold bands, that

9. J. Papadimitriou, in Praktika 1952, 435-9.

10. Ancient Mycenae (1957), fig. 43; cf. Phylakopi I, Pl. 19, especially Ia-c.

around the left arm was a thin strip, the other two were shaped like a double leaf: all were plain. This grave was probably slightly later than Zeta, and its occupant was slightly richer; but between them they provide good evidence of the growing prosperity of Mycenae, closely linked to foreign contacts.

The remaining twelve graves are spread fairly evenly over the area of the circle: all are oriented roughly north-south with the exception of Alpha, which is more east-west. However, the burials inside them have no systematic orientation: some had their heads to the north, some to the south, and earlier burials might either be pushed to one side or heaped in a corner. The skeletons were usually extended, probably because the size of the graves allowed it. Most were reused, and it is consequently impossible to work out an exact sequence: but all belong, to judge from their pottery, to the later part of the Late Phase, and several contained LM IA and LH IA vases. They form no obvious groups, but there are signs of a sequence of increasing wealth and importance, apparent from the construction of the grave as well as its contents.

The southernmost grave of the circle, Kappa, was large, but contained only a single skeleton and four vases.¹¹ Two of these were decorated in bichrome style, a beaked jug and a large four-handled jar, which had several horizontal registers of decoration and applied clay bands round the body: the lowest register contained a frieze of

11. J. Papadimitriou, in Praktika 1953, 214-5.

small displayed birds. The floor was strewn with pebbles, as were the floors of nearly all the later graves. Four stone slabs were found in the north-east corner; these can hardly have been roof-slabs, since none were found elsewhere, but may have formed a grave-marker, or possibly the 'table' of a ceremonial meal. The absence of weapons suggests that this was a woman's grave.

Grave Ypsilon, also in the south, was certainly that of a woman.¹² It had been badly damaged, partly, it seems, by the construction of Grave Rho, for its north wall, of mud-bricks, was also the south wall of the Grave Rho cutting. Its other walls had been largely destroyed, but may have been of stone, since many stones were found in the grave: these could also have formed a marker on the surface, but it is perhaps unlikely that they should have got so deep into the grave. The dead woman was only about thirty, and was dressed in all her finery. She wore a gold head-dress made up of two leaf-shaped plates, held by a head-band with curved top: all were decorated with repoussé bosses and dots. She had silver circlets for earrings, and a double necklace of semi-precious stones, with four faience beads and a pendant of dark brown stone as the centrepiece. Another gold band was found by her shoulder; Mylonas has suggested that it was used to braid her hair. Nine vases were placed around her: six were stemmed goblets, of which one was Grey Minyan with true rings on the stem, while the rest, in various shades, had incised

12. J. Papadimitriou, in Praktika 1954, 260-61; cf. also Mylonas, op.cit. (1966) (supra, note 2), 104.

rings. Two were Matt-Painted jars and one was a fine small Matt-Painted askos. By the smaller jar, at her right shoulder, were three bronze rings and a fine series of pins, one of silver, three of bronze. Of the bronze ones, one had a flat oval head with five holes, set in the shape of a cross, and another had an obliquely grooved head of rock crystal. This fine array of jewellery may be shown to have MH ancestors, with the exception of the head-dress: but no MH woman's burial was so richly provided.

This grave is closely connected by its contents to Grave Xi,¹³ at the north end of the circle. This was much the same size as Ypsilon, and seems to have had a pile of stones as a marker on top. In one corner, there were the heaped bones of an adult, a woman according to Mylonas, while in the centre was the extended skeleton of a small girl. The adult had no goods, and had originally been buried in a contracted position: it may have belonged to an earlier grave, completely destroyed in the construction of Grave Xi, but it might also have been that of a slave, sacrificed to accompany the child and buried in this position. The child wore an elaborate head-dress of gold leaves with pendant strings of semi-precious stones, a necklace of stone beads with one faience bead of exactly the same type as those in Ypsilon, and two hair-ornaments, a finger-ring and earrings of gold wire. A round grooved gold object may be a rattle or the head of a pin. The head-dress was more elaborate than that of Ypsilon, consisting of

13. J. Papadimitriou, in Praktika 1953, 229-31; Mylonas implies in Grave Circle B of Mycenae (1964), 5, that the adult was a woman.

three rosettes, made up of two double-leaf plates, held in place by bronze pins, a head-band of long oval shape, and semicircular strings of beads pendent by the temples. Several vases were grouped around the child's body, including ring-stemmed goblets, one of Grey Minyan but with incised rings, jugs, a fine Matt-Painted kantharos and a plain askos. These goods, especially the head-dress, suggest that the child came from a family of considerable importance.

Grave Mu in the south of the circle had been used twice for children's burials.¹⁴ In the north-west corner were found the heaped bones of a small child, maybe a girl, with fourteen small vases of fine late MH type. In the centre was the extended skeleton of an adolescent girl who wore a necklace, with five vases, four low-stemmed goblets and an askos that is probably LM IA. Two vases and three bone pins in the north-west corner might belong to either burial. The necklace of the later burial was made up of the usual semi-precious stones, but had as centrepiece a sealstone: this was of the 'talismanic' class, certainly of Cretan origin and transitional MM-LM date.¹⁵ The vases of the earlier burial include a series of Grey Minyan and plain stemmed cups, jugs and jars, a heavy askos with incised spirals on a dark coat, and two smaller askoi with decoration in glossy paint that are probably LM IA. These burials, then, although

14. J. Papadimitriou, in Praktika 1953, 221-3; cf. Mylonas, op.cit. (supra, note 13).

15. Cf. V.E.G. Kenna, Cretan Seals (1960), 44-5, on the 'talismanic' class.

relatively poor, must be among the latest of the circle.

The remaining eight graves are the largest and finest of the whole cemetery. They contained eighteen certain burials, twelve men, four women, and two probable men; there are traces of another possible burial in Epsilon. All are 3 m. or more in length and 2 m. or more in width; five had walls built of rubble or slabs, four had slabs as well as beams in the roof, four had stelae erected over the top, and three had slabs as a 'table' in the fill. All were rich in weapons and personal ornaments, and contained objects comparable with material from Grave Circle A.

Two graves seem to have belonged exclusively to women, Epsilon and Omicron. The former¹⁶ contained one strongly contracted skeleton, and teeth that may have belonged to an earlier burial; the presence of many vases in the fill also suggests an earlier burial. Three slabs in the fill had apparently been used for a ceremonial meal: on the roof stood a Grey Minyan goblet, containing the bones of a small bird, that was presumably an offering at the time of burial. Behind the back of the certain burial lay a mass of gold ornaments, head-bands, and 'stars' made up of two double-leaves, all with repoussé decoration of bosses and dots. In the corners were four bronze or copper vases, a broad bowl or basin, a jug with highswung handle, and a jug inside a krater. Several large plain and Matt-Painted jars were found in the tomb, one inside the krater: other pottery, probably from the fill,

16. J. Papadimitriou, in Praktika 1952, 457-61.

included one Matt-Painted and two plain cups, and two Grey Minyan jars of the same type as those from Grave Mu. The bronze or copper vessels were large, like those of Circle A: the jug with highswung handle, which was largely corroded, had spiral decoration and fluting. An ivory pin with gold-leaf-covered head was also found in the northern half of the grave.

Grave Omicron had certainly been used for two burials.¹⁷ The earlier was heaped up on the west side, without goods: but a series of goblets and an unusual necklace of heavy steatite and clay whorls, that were found on the roof, may belong to this burial. The later burial was a young woman of considerable importance, since a plain stele was erected over her grave: on and around her was a great quantity of jewellery. She apparently wore two crossed gold bands as a head-dress, a short necklace of carnelian and amethyst beads and a long one, reaching to her waist, of amber. Three pins were found at her right shoulder, two bronze with large rock crystal heads and one silver with a gold-leaf-covered wood head; another of bronze with a rock crystal head was found on her chest. Also at her right shoulder was a rosette made up of gold strips, held in place by a bronze pin. Two gold ear-clips lay on either side of her skull. Other goods laid around her included one necklace of carnelian and two of gold beads, two gold arm-bands of wire spirals, four small round gold plates, two rectangular embossed gold plates, pieces of decorated ivory plate,

17. J. Papadimitriou, in Praktika 1953, 232-7; Mylonas, op.cit. (supra, note 13), has a clear description of the main finds.

and a seal-stone of 'talismanic' type, that was probably the centrepiece of a necklace. One necklace of gold beads consisted of tubes with attached spirals, a type also found in Grave III, the other of beads that may have been intended to represent birds' wings, a type found in the Aegina Treasure.¹⁸

There was also much pottery, and a fine spouted bowl of rock crystal with a duck's head handle. The pottery included many large decorated jars, some plain and coarse small jars and askoi, a kantharos with 'angular' handles like those of north Greece (see FIG.11) and a holemouth jar with spiral decoration. This has been called LH I, but is more likely to be LM IA: it might even come from Kythera.¹⁹ A piece of a LH I Vapheio cup was found under the stele. This grave is therefore late, as the strong connections with the jewellery of Graves III and IV suggest.

Of the men's graves, Iota and Lambda seem to be slightly poorer and older than Alpha, Delta and Nu, but the difference cannot be great. Both contained two men,²⁰ but in each case the earlier burial had few goods. It may be that, as has been suspected in the case of Mycenaean chamber tombs, many of their goods were removed by later users of the grave, but what was left was very fine: the burial in Iota had a gold-rimmed silver Vapheio cup, that in Lambda a knife, two obsidian arrowheads, and four gold bands and a gold strip that were

18. SG, Pl. 21:56-9, and BSA 52 (1957), Pl. 12:a-b.

19. I owe this suggestion to Mr. N. Coldstream.

20. J. Papadimitriou, in Praktika 1953, 212-4 (Iota), 215-9 (Lambda).

pierced for attachment, and so presumably were clothing-ornaments.

The central burial was certainly a warrior in each case. In Iota, he was provided with a Type A sword, a broad knife of 'razor' type, and a pair of tweezers. At each wrist he wore two triangular gold bands, pierced along the broad end for attachment, and two gold 'garters' were found in the abdominal area: these must have decorated clothes or a belt and wrist-bands. He was also provided with eleven vases, four of which were large jars: one of these probably contained flour, another oil. The most important objects found are not mentioned by Mylonas or Papadimitriou: these were bone mounts of zigzag shape that decorated a wooden staff, which are on show with the goods of this grave in the National Museum at Athens. They are exactly paralleled by the mounts from Bush Barrow, a grave of the Messex Culture in Wiltshire.²¹ They provide the earliest indication of the extremely widespread connections of Mycenae in the period of the Shaft Graves.

The central burial of Lambda, a large man about 1.80 m. high, had no goods immediately next to him, but it is a justifiable assumption that the goods along the west wall were his. These included a wide selection of weapons, a Type A sword, spearhead, dagger, two knives and a set of flint and obsidian arrowheads. Both sword-scabbard and spear-shaft were bound with gold, and the sword-pommel had a gold cover: the sword-trappings were finely decorated, and the weapon itself had grooves along the sharp midrib, and at the heel a traced

21. S. Piggett, Ancient Europe (1965), 128, fig. 68:4, and 134.

butterfly on either side of the blade. Only a few vases were found in the grave, but many, including finely-decorated jars and goblets, were on the roof or in the fill; these may have belonged to the earlier burial.

Graves Alpha, Delta and Nu contained seven burials, all of whom may be assumed to be men,²² although no goods can be assigned to the first burial in Delta, which held three. They all seem to have been warriors: the graves contained six Type A swords, two spearheads, a variety of short swords, daggers and knives, and, in Delta, a group of arrowheads, seventeen of flint and two of bronze. Several of the swords had decorated blades: that of Grave Delta was magnificent, having running griffins in low relief down the blade, and hilt-plates of gold, decorated with spirals, having slightly pointed shoulders in the shape of bull's or goat's heads, and ending in lion's heads that appear to grip the blade.²³ Comparable blades with running griffins or horses have been found in Graves IV and V, but in each case the style is different.²⁴ A LH IA jar was also found in the grave, showing that the final burial was certainly late.²⁵

A notable feature of these graves is the presence of vases in precious materials, two silver, two bronze and one faience in Alpha,

22. J. Papadimitriou, in Praktika 1951, 197-203 (Alpha), 1952, 451-7 (Delta), 1953, 211-2 (Alpha), 223-9 (Nu).

23. Praktika 1952, 457, fig. 26.

24. SG, Pls. 86, 92:747.

25. Praktika 1952, 455, fig. 24.

one large bronze basin in Delta, one gold, one silver, two bronze and one stone in Nu. The faience cup from Alpha is similar to examples from the MM IIIB Temple Repositories at Knossos:²⁶ the stone vase from Nu is apparently Cycladic, but of a type found in EM tombs.²⁷ The known shapes of the metal vases are cups, a beaked jug and a basin: all are likely to be Cretan, either imported or made locally by Cretan craftsmen. Gold ornaments, an armlet, 'garter' and bands, were found in Alpha, and in Nu plates of boar's tusk, probably from a helmet, a gold band that must, from its position, have been attached to the collar of a garment, and several other oval gold bands and half-bands. These accumulations of wealth are closely parallel in character to those of Shaft Graves VI and II, and stelae stood over Graves Alpha and Nu as further proof of their importance: these men must have been among the most important followers of the kings themselves.

Gamma is, with Alpha, the largest of the Circle B graves, and it contained four burials.²⁸ Its long sides were built of small slabs, its short sides of mud-brick, and there seems to have been a layer of clay-packed reeds over the beams of the roof. Several stele-fragments were found over the roof: as reconstructed by Marinatos, the sequence was of one plain and one decorated stele, which fell in when

26. PM I, 499, fig. 357.

27. P. Warren, "The first Minoan Stone Vases and Early Minoan Chronology", in KC 19 (1965), 14, note 3.

28. J. Papadimitriou, in Praktika 1952, 439-51.

the roof collapsed, upon which the plain stele was re-erected, using the decorated stele as a base.²⁹ This treatment of a decorated stele is remarkable: but it may be that it was broken in the collapse, or it may have been botched from the start, and have originally been used as a base. Whatever the explanation, the re-erection seems to have been a rather perfunctory affair.

The two earlier burials in this grave, a man and a woman, had been pushed against the east wall. The man's goods included a fine array of weapons, two Type A swords, a spearhead, a dagger and two knives; a bronze belt is the only object attributed to the woman, but an ivory comb and bronze pin on show in the National Museum may also belong to her. In the north-east corner, under and near a fine jug and large plain jar, were a cup, head-band, 'garter' and band of gold, and two small vases, which were also probably goods of the earlier burials. A third burial was extended along the south wall: it was that of a man of about 28, 1.70 m. (nearly 5ft.7in.) in height, provided with only three vases, a Matt-Painted hydria, a goblet and another small vase. He had a fractured skull, had undergone a trepanning operation, and had died very soon after. Although still young by our standards, he would have been in the prime of life, even middle-aged, in a time when the average life-expectation for men was 40: his lack of fine goods cannot therefore be explained by his youth, but may in some way be connected with his injury. This could have

29. S. Marinatos, "περὶ τοὺς νέους βαλυστοὺς τέφρους τῶν Μυκηνῶν: αἱ στήλαι", in Γέρης Ἀντωνίου Κερκινόπουλου (1953), 66-73.

caused him to become unbalanced: as such he might well have been regarded with superstitious fear, and it may have been felt dangerous to leave weapons with him.

The fourth burial, and probably the last, was clearly a man of great importance. He was the only man in Grave Circle B to possess a death-mask, which was of electrum and comparable in style to the more primitive examples in Grave IV.³⁰ He was a tall man, over 1.80 m. in height, and clearly a warrior; by his side were a Type A sword, a long dagger, and two knives, while behind his head were at least one Type A sword, a Type B sword, a large cleaver-like knife, and several smaller blades. These weapons included some with decoration, and generally had pommels of ivory or alabaster. In the north-west of the grave, behind his head, were found a group of four small vases and the remains of a wooden box, apparently silver-plated, with rich contents. These included a gold cup, a necklace of bronze beads, with one of rock crystal, and the 'portrait gem' of amethyst. A bronze cup, holding two alabaster pommels, and the mask were beside the box.

Relatively few vases were found inside the grave: most came from the fill. Marinatos has suggested³¹ that these were thrown in after a ceremonial meal as part of the funeral rites. Animal-bones in the fill do suggest that such a meal took place, but the vases are not generally of the character that one would expect. Marinatos's later

30. SG, Pls. 47-8.

31. Marinatos, op.cit. (supra, note 29), 63, and more recently, "A Libation Ceremony at Mycenae", in AthAI 1 (1968), 60.

statement that over thirty were stemmed goblets does not tally with his earlier comment on their being principally goblets and jugs, nor with other descriptions of the vases, nor with the Nafplion Museum inventory and the contents of the storerooms. I could only find five plain goblets, of which at least one must have come from inside the grave, and few other plain vases. These may have been used for a ceremonial meal: but the majority, very varied in shapes and decoration but generally of the finest wares, are more likely to have belonged to the earlier burials as Mylonas has contended. Some are fine large jars and 'bird-jugs', which would hardly have been of much use in a ceremonial meal.

Probably the most interesting find from Grave Gamma is the 'portrait-gem' of amethyst, showing the head of a bearded man. This belongs to a very rare class of Cretan gems:³² one, found at Knossos in a MM III - LM I context, does resemble the Gamma gem in its manner of showing the hair and nose, while an earlier sealing depicts the eye in the same way. But in quality the Gamma gem surpasses these, and it seems at least possible that it was a commissioned piece. It may well be contemporary with the rings and gems of Circle A, since the grave contained several LM IA and LH IA vases; in this case it could have been made at Mycenae, but it is also possible that the man visited Crete and had it made there.

32. Ancient Mycenae (1957), fig. 49; cf. Kenna, op.cit. (supra, note 15), 40, figs. 53-9, and 45, fig. 78.

(3) Grave Circle A (See Appendix (2), and FIG.17)

It is no longer possible to doubt that Grave Circle A was largely reconstructed in LH IIIB. Wace presented conclusive evidence for this in 1953,¹ in the form of LH IIIB sherds from the retaining wall on the west side of the circle. Marinatos argued that the wall and graves were contemporary, on the grounds of the rarity of the material used for the majority of the wall-slabs, the same shelly limestone as that used for most of the stelae.² But Mylonas has noted that this material occurred in the Grand Staircase of the Palace,³ and in any case the argument cannot be allowed to stand against the clear evidence of the pottery.

It seems likely that this reconstruction was connected with an extension of the fortification walls to take in the area south-east of the Lion Gate. It is not clear exactly what was done: certainly several of the stelae were re-erected, and a new wall was built around the area, but there is evidence that the whole fill of the Circle was deeply disturbed. The fill of Grave I, which was closer to the surface than the other graves,⁴ was completely changed, and two LH III figurines of the Psi type were actually found in the grave.⁵

1. A.J.B. Wace, in BSA 49 (1954), 244-7, with Pl. 41.
2. Marinatos, op.cit. (supra, (2) note 29), 78-9.
3. Mylonas, op.cit. (1957) (supra, (2) note 2), 115.
4. Cf. Mycenae (BSA 25), Pl. 17 (sections of the Circle).
5. Mycenae and Tiryns, 154-5, 158-9.

Other figurines were found in the fill of Grave III, and under a boulder overhanging the area of Graves III and IV.⁶ Quite possibly the disturbance of the central burial in Grave V, which may well have involved a partial robbery, took place at the same time:⁷ but in no other grave does the burial-layer seem to have been disturbed. Stelae and slabs were found at various depths in the fill, as well as on top of the graves: it seems possible that complex grave-monuments were built over the more important graves after their period of use, but that these collapsed, and only the stelae were re-erected. The people who reconstructed the circle do not seem to have known how many graves there were, nor how many burials in each grave: no stelae at all were found over Grave IV, but two over Graves III and I, which held three burials each, one over Grave VI, which held two burials, and two over Grave II, which held one.⁸ Only over Grave V did the number of stelae, three, correspond to the number of burials. Moreover, Schliemann found many stele-fragments in the Circle Area and to the south of it, in an upper level:⁹ these may belong to other stelae that had been re-erected in various spots but were later broken and scattered.

6. Mycenae and Tiryns, 161, 163.

7. Mycenae and Tiryns, 295.

8. Doubt has been expressed about the presence of two stelae over Grave II, but Mycenae and Tiryns, 92, is quite clear: the two were found within a foot of one another in the same line.

9. Mycenae and Tiryns, 93.

They did, however, know approximately the size of the Circle, and they seem to have known or discovered the orientation of the stelae: for these all faced west, although the entrance to the Circle was on the north, and the most plausible explanation is that this was their original orientation. It does seem that from the period of its use to that of its reconstruction the Circle maintained a certain sanctity, for it was never built over, as was the Prehistoric Cemetery, nor encroached upon by later graves, as was Circle B. This is consonant with its having held the earliest 'royal family', the founders of Mycenae's greatness, while Circle B held mainly their followers.

As I have noted, the graves form a unit, in that the normal orientation of burials is with head to the east and feet to the west: the only certain exception is in Grave IV, where two men had their heads to the north, and it is possible that these were moved during later use of the tomb. But the six graves can be subdivided. Graves VI and II are most easily comparable to the richer burials of Circle B, and are, indeed, poorer than some of these: they contain the burials of three warriors, who may have been less important members of the 'family'. Grave I, although almost as large as Graves IV and V, is also relatively poor: it contains both early and late pottery, and may have been used for minor female members of the 'family'. Graves IV and III, cut side by side on a platform in the rock,¹⁰

10. Mycenae and Tiryns, 162.

contained the richest burials, the men wearing gold masks, most of the women crowns or diadems, and one child being completely wrapped in gold: these are surely 'royal', and so is V, in which two men have masks. But V is poorer than IV in several ways, and its masks seem stylistically later: its earliest burial, arguably the central one, which may have been robbed, may have been non-royal, while the other two were later than the burials in IV. Other explanations are possible: the kingship might have alternated between two branches of the same family, represented by the two different graves. As will become clear, the pottery suggests that the major graves could all have been in use simultaneously. For this reason, it will be easier to consider the contents of each grave separately.

Grave VI was a relatively narrow grave, little over 3 m. long and less than 2 m. wide.¹¹ Stamatakis found a plain stele over it, presumably on the reconstruction-level.¹² It contained two men, one of whom had been heaped in a corner; he apparently had weapons and pottery by him, while the other man, extended in the centre, had a gold cup by his head, weapons by his side, and large vases at his feet. The cup is very small and flimsy: it has close parallels in Graves V and II,¹³ suggesting that burials in these graves may have

11. V. Stais, Collection mycénienne du Musée National, Vol. II (1915), 72-3, gives the best description; SG, 160-66 (finds); Platon, op.cit. (supra, (1) note 30), 556, note 36, gives the measurements as 3.15 by 1.85 m.

12. C. Tsountas and J.I. Manatt, The Mycenaean Age (1897), 91.

13. SG, 161, fig. 78 (VI), Pls. 123:627 (V), 170:220 (II).

been close in date. There were only a few gold ornaments and remains of other vases of precious materials: the majority of the finds consisted of weapons and pottery. The weapons included a Type A sword and fragments of at least two more, two short Type E blades, a Type B dagger, a very broad blade that seems to be an enlarged ogival dagger, a small triangular dagger, and four formidable spearheads, varying in length from c. 28 to c. 44 cm., of which the blade was about half. There were also various small knife-blades, two whetstones and two 'arrow-polishers'. Several of these weapons had rivets plated with gold or silver, but they were otherwise quite plain, less ornate than several in Circle B.

The pottery included many fine late MH vases in bichrome and polychrome styles, both cups, 'bird-jugs' and jars, but also two that are probably imports. One, a squat jar with two handles from rim to shoulder and decoration in dull red, brown and white on a light clay, is fairly close to a jar from the MM IIIB Temple Repositories at Knossos.¹⁴ The other is a fine ewer with decoration in glossy brown paint: its shape and subsidiary decoration of running spirals and ivy are closest to LM IA, but the shoulder-decoration, concentric arcs flanked by rows of dots, is quite unknown in Crete, although it has some rather distant relatives in the Cyclades.¹⁵

14. SG, Pl. 175:956, cf. PM I, 557, fig. 404:g.

15. SG, Pl. 175:945; PM I, 557, fig. 404:f, shows a coarser version of the shape; cf. also Archaeology of Crete, Pl. 27:3b (stone). For the subsidiary decoration, cf. BSA 62 (1967), Pl. 76:b, and Archaeology of Crete, 202, fig. 36:6; for the shoulder-decoration, cf. Phylakopi I, Pl. 24:2; Deltion 22 (1967) B, Pl. 353:c (Kea).

The latter may be used to date the second burial to the very end of the MH period, when LM IA vases were being imported, but the LH I style had not begun.

Of the same date is the single burial in Grave II.¹⁶ This grave was as large as most of those in Circle B, 3.05 by 2.15 m., and had rock-cut sides and a roof of beams and stone slabs. Over it were found one decorated and one plain stele. Two horizontal slabs found lower in the fill cannot have been roof-slabs, for these had fallen into the grave, but may have been used for a ceremonial meal. The man in this grave wore a gold head-band, shorter and narrower than those in the women's graves, and had a gold cup on his left; on his right were laid his weapons, a Type A sword, a large spearhead, a short triangular dagger, and some fragmentary knives, all of which may have been wrapped in linen. There were fragments of vases of bronze and ivory and one faience jar, which Pendlebury recognised as an Egyptian import.¹⁷ The pottery included a coarse Matt-Painted jar, a fine pointed rhyton which has LM IA parallels in shape and decoration from Gournia,¹⁸ and fragments of other vases, including a bichrome 'bird-jug'. This man's spear was even longer than those of Grave VI, being 47.5 cm. long; it had a ring attached to either side of the socket, through which thongs may have been run to help fix it

16. Mycenae and Tiryns, 290-93; SG, 70-71; for the measurements of this and other graves, cf. Platon, ibid. (supra, note 10).

17. Aegyptiaca, 55.

18. SG, Pl. 170:221, cf. H.B. Hawes, Gournia (1908), Pl. 7:38-40.

firmly to the shaft. There are no other certain cases of a man wearing a head-band.

Grave I was a much larger grave than either of these, 5.50 m. long by nearly 3 m. wide.¹⁹ Two plain stelae were found over it, and two slabs were near the top of the fill. Since the fill was not the original one, it does not seem that these can have been a table for a ceremonial meal; possibly they were put in to strengthen the foundations of the new stele-mound. The grave was lined with high rubble walls and contained three burials, judged to be women by their goods. These were remarkably similar: each woman, according to Schliemann, had five oval gold bands, and four or five gold 'stars', made up of two double-leaf bands. In fact, Karo records only three full bands, but it is clear that Schliemann believed that others were made up of pairs of half-bands; there were twenty-seven of these, enough to provide each burial with nine. The full bands and all but one of the half-bands had exactly the same decoration, of concentric circles and dots; the 'stars' also formed a set, decorated with concentric circles and edged by foliate ornament, and the single different half-band had similar concentric circles alternating with rosette-filled circles. All of these objects were of very thin gold, compared to their parallels in other graves. Their great similarity might suggest that the burials were contemporary, but the range of the pottery seems to make this impossible.

19. Mycenae and Tiryns, 154-6; SG, 66-9.

The pottery falls into three distinct stylistic groups, which presumably go with the different burials. The earliest are a Matt-Painted kantharos and 'bird-jug', the latter closely resembling those of Grave VI.²⁰ Next comes the majority of the vases, seven small jars with two, three or four handles and definitely Mycenaean decoration of double-axes and cross-hatched ornaments, that can certainly be dated LH I and are probably LH IB.²¹ Finally, there are two extremely interesting vases, an open spouted bowl and a fine ewer.²² The former's shape is typical LM IB;²³ its external decoration of rows of dotted crosses has been found on Kytheran vases, and its internal decoration of rather skimpy nautili is exactly paralleled by the shoulder-decoration of a pithoid jar from the LM IB destruction-deposit of Aghia Irini on Kea.²⁴ The ewer's decoration of ivy-stems is an early example of the LH IIA plant-style, and is probably by the same hand as the decoration of a pithoid jar from tholos 1 at Tragana.²⁵ These vases, then, have their best parallels in LM IB and LH IIA, and may be dated early in the LH IIA phase: as such, they are the latest vases in the Shaft

20. SG, Pls. 168:198, 174:200.

21. SG, Pl. 167:190-96.

22. SG, Pls. 168:197, 169:199.

23. It is extremely common in the unpublished Royal Road deposits at Knossos.

24. This material is unpublished.

25. ArchEph 1914, Pl. 2:1, 3; Ialysos, 191, note 4.

Graves, and overlap with the earliest pieces in the tholoi of Mycenae.

This late date is supported by other goods in the grave, a group of multitubular glass beads, of the type called 'Nuzi beads', which have a wide distribution in the Near East.²⁶ Beads of the same type were found with a woman's burial in T. 516 at Mycenae, which can be dated LH IIA by the associated pottery.²⁷ Other goods which cannot be assigned include two cups of silver, one having a gold-plated rim, two complete and other fragmentary faience vases, fragments of decorated ivory vases, and two amber beads. A bronze knife was also found, which is perhaps surprising, but may be paralleled from Grave III. Considering all the broken goods, these burials were rather richer than the women's burials of Circle B, and were surely of important women, even if not 'queens'.

The other women's grave, III, was smaller than I, only 3.7 by 2.7 m., but it was much richer.²⁸ Two plain stelae stood at the reconstruction-level, with two horizontal slabs a short distance below, as in Grave I. Some distance further down in the fill, a group of slabs was found: one was a normal rectangular slab, one a slab with a gable-top, and one a short cubic column.²⁹ These may have belonged to some monument that originally stood over the grave:

26. SG, Pl. 150:209; T.E. Haevernick, "Beiträge zur Geschichte des antiken Glases XIII. Nuzi-Perlen", in JRGZM 12 (1965), 35-40.

27. Haevernick, op.cit. (supra, note 25), 37; OMP, 48.

28. Mycenae and Tiryns, 161-210; SG, 43-66.

29. Mycenae and Tiryns, 161, fig. 234.

the gable-topped slab was the height and width of a large stele.³⁰ The grave was lined with walls made up of clay-joined fragments of schist, and contained three burials, which were judged to be those of women because of the smallness of their bones and teeth. It has also been customary to state that two children were buried in this grave. The only evidence consists of some gold wrappings that seem to have served as a shroud. It does not seem that there are enough for two children: only one mask, two ear-pieces, one chin-piece, two hand-pieces and three foot-pieces were found.³¹ If it was intended that the child should be covered back and front, these are hardly enough even for one. Schliemann himself thought that only one child had been buried here; the idea that there were two may have arisen from his theory that the grave was that of Cassandra and her two infant children by Agamemnon.³²

At least two of the burials in this grave were of great importance, for one wore a crown and the other a massive, intricately decorated head-band, both of gold.³³ Two sets of gold ornaments related to these may be distinguished, each consisting of seven half-bands and three 'stars', and each also had a pair of spiral-ended

30. Karo appears to refer to this piece in SG, 172 (a), where he states that it was 1.57 m. high to the angle of the gable, and 1.19 wide.

31. SG, 62, no. 146.

32. Mycenae and Tiryns, 198-9.

33. SG, Pls. 11-13, 14:3.

gold earrings and probably a pair of gold scales.³⁴ Another set made up of an early-looking electrum head-band and pair of spiral-ended earrings, a flimsier pair of scales, a rosette pin-head made up of gold strips, and one or two dress-ornaments, might be attributed to the earliest burial.³⁵ There is no other evidence for relative chronology within the grave: one small vase, a LH IA squat jug, was found.³⁶ Two pieces of fine Matt-Painted jars found probably belong to the earlier burials disturbed by the construction of Grave III, since at least one came from that level.³⁷

The quantities of material found in the grave suggest that the dead were not merely buried in their best finery, but with most things of value that they possessed, for it is impossible that they could have worn all the necklaces, dress-ornaments, arm-bands and pins that are represented (see Appendix (2)). We have already seen, in Omicron, more necklaces and pins laid with the dead woman than she could have worn together. The goods had a fairly limited range. There were precious vases, of gold, silver, alabaster and faience, as well as gold-plated boxes and large vessels of copper: among the gold vases we may note several small pots with wire-attached lids,

34. With the crown go SG, Pls. 15:7, 19:86-8; with the head-band, SG, Pls. 14:5, 25. Cf. also SG, Pls. 34:81-2 (scales), 20:53, 55 (earrings).

35. SG, Pls. 17:37 (head-band), 89 (rosette-head), 20-54 (earrings) p. 15, fig. 53 (scales).

36. SG, Pl. 166:156.

37. SG, Pl. 149:161-2; cf. MTh, 5.

presumably ointment or perfume pots. There were no less than seven hundred and one round gold plates, which were found strewn all over the grave, over and under the bodies. These often formed sets of fifty or more with the same decoration: some were pierced for attachment to clothing, while others may have been glued on. The same is true of a range of cutouts which are often confronted or addorsed pairs of animals: these and other cutouts were occasionally joined together in pairs to form beads or pinheads. There were several dress-pins, some of bronze with rock crystal heads, others of silver with gold heads, including one extremely fine example with a hook shape and a pendent gold head, representing a goddess with arms outstretched to palm-leaves that spring from above her head: this was actually found on one of the bodies. There were necklaces of many types of gold bead, of amber and carnelian, and there were a few beads of other materials, the most interesting being two early glass relief-beads.³⁸ Three flattened cylinders of gold with splendid decoration involving men and lions, and two sealstones, also with figured decoration, may have been strung on necklaces or separately. Some gold ornaments made up of wire spirals were probably arm-bands. The gold half-bands are best seen as dress-ornaments: it has been suggested that they were attached to a high crown of hide or leather above a full band,³⁹

38. SG, Pl. 20:7; T.E. Haevernick, "Beiträge zur Geschichte des antiken Glases III. mykenisches Glas", in JRGZM 7 (1960), 49.

39. C.P. Cardaras, "Gold Crowns from Mycenae" (summary), in AJA 54 (1950), 260-61.

but this would involve a head-dress over half a metre high, and in any case the women already have crowns, to which the sets of bands are linked stylistically. Objects of uncertain use, possibly religious, are the sets of gold scales, a knife, and two sickle-like objects of bronze.⁴⁰

Grave IV was the largest of all the Shaft Graves, about 6.5 by 4 m., and it contained five burials, three in the northern part with their heads to the east and two in the south with their heads to the north.⁴¹

The latter two wore masks, and were certainly men; one of the former did, while gold crowns were associated with the other two, surely women. No stelae were found over this grave, but only

three feet above the grave-floor was an almost circular structure of rough stonework with a circular opening, under which were two horizontal slabs and a 'column'.⁴²

Mylonas has shown conclusively that the circular structure, the so-called 'altar', must from its position have stood over Grave IV originally and have fallen into the fill upon the collapse of the roof: it cannot have been the centre of a cult of the Shaft Grave kings in later Mycenaean times.⁴³ Its original purpose is unclear: libations could have been poured through the opening. Schliemann states that it was found over the exact

40. SG, Pl. 149:154-5.

41. Mycenae and Tiryns, 212-88; SG, 71-121.

42. Mycenae and Tiryns, 212-3.

43. Mylonas, op.cit. (supra, note 3), 111-3.

centre of the grave. The grave itself was lined with large slanting walls of the same type as those in III, but still had ample room for the burials.

This was undoubtedly the richest and most important of all the Shaft Graves. Over thirty large copper vessels were ranged around the walls, some of which contained other goods: the Stag Rhyton was found in one in the south-east corner. The two bodies in the south wore masks very similar to one another and to that of Grave Gamma, and between them was a large group of weapons. Near the head of one was a group of over four hundred amber beads, and near the southern wall was the Bull's Head Rhyton, of silver with gold accessories. The man in the northern part wore a heavy gold mask and plain breast-plate; with him and the two women's burials were found the Lion's Head Rhyton, two fine gold seal-rings, a heavy gold armlet, and another group of over four hundred amber beads. All the bodies were covered with gold ornaments and had near them large groups of gold-covered bone or wood roundels, that may have ornamented clothes or fittings of some sort.

The rest of the material cannot be safely assigned to any particular burial. It included many great treasures, the Siege Rhyton, the recently-restored Battle Krater, three inlaid daggers, Nestor's Cup and several other massive gold cups, remains of an inlaid faience gaming-board, large gold head-bands and long ribbons of gold, possibly from shield-straps, many weapons, particularly swords with finely-decorated blades or gold hilt-plates and scabbard-plates, a

formidable series of 'slashing weapons', and six faience objects shaped like the Cretan 'sacral knot'. There is one group of objects that looks out of place amid all this magnificence and would be more appropriate to a Circle B grave or even a MH one. This includes a 'shoe-slot' spear, a group of flint and obsidian arrowheads, a pair of bronze chisels and other bronze tools, some rather insignificant knives, and a whetstone.⁴⁴ These could have belonged to the earlier burials, whose hoards may not have exceeded those of the later Circle B burials and Graves VI and II by so very much.

The chronology of this grave is not easily fixed, for the pottery surviving consisted almost entirely of plain vases: one late bichrome jar was found.⁴⁵ However, many fine sherds were also found:⁴⁶ these included pieces from white-on-dark and polychrome light-on-dark ewers, a bowl-rim with dark-on-light ripple decoration, and pieces of what Schliemann described as a wheelmade, two-handled vase with a decoration of spirals, cross-hatched circles and bands.⁴⁷ This last cannot be identified among the pieces illustrated by Furtwangler and Loschke, but sounds like a LH IA jar. The others are definitely of MM III - LM IA types,⁴⁸ and very probably come from

44. SG, Pls. 97:454 (knife), 98:438 (chisel), 101:536-40 (arrowheads), 102:437 (tool), 457 (knife), 463 (spearhead), 512 (whetstone), 514-5 (tools?).

45. SG, Pl. 171.

46. MTh, Pls. 5-6.

47. Mycenae and Tiryns, 234-5.

48. A.J. Evans, The Shaft Graves and Beehive Tombs of Mycenae (1929) 24-5.

vases originally in the grave and later removed, for the fill of this grave does not seem to have been disturbed, and such fine pieces are unlikely to be found in normal MH deposits, such as might have been in the area of the Circle before the construction of the grave. Together these give a perfectly acceptable date for the burials, the last part of MH and early LH I, the same period as that of Graves VI and II and the later graves of Circle B.

Grave V was also very large, 5.77 by 2.85 m., and it was surmounted by three fine stelae decorated with chariot-scenes.⁴⁹ About a metre below these was a group of slabs, one having a border, that may have belonged to an original grave-monument. In the fill was a scatter of goods, gold-covered buttons, fragments of ivory, two ribbed boar's tusks and boar's tusk plates, and much pottery. The grave had originally been lined with rubble, but a wall of schist fragments joined by clay had been superimposed on this. The area left for burials was no more than 5½ feet wide, and it is not therefore surprising that, as Schliemann noted, the burials had to be squeezed in. All had unusually large bones, and were surely men. The burials on the north and south wore gold masks and breast-plates, but that in the centre had only a few round gold plates on and by him, and the layer of clay and pebbles that covered the rest of the grave was not found over him.⁵⁰ This burial had clearly been

49. Mycenae and Tiryns, 151-4, 293-332; SG, 121-60.

50. Mycenae and Tiryns, 295.

disturbed, and the goods found in the fill may well have belonged to him, scattered during a hasty robbery; but he may not, in any case, have been as rich as the others.

Schliemann gives us more information about the disposition of the goods in this grave than in the others. The northern burial seems to have been a relatively young man: he was judged from his teeth to be about 35. In some way his body seems to have been embalmed or mummified:⁵¹ this remains unique for a Mycenaean burial. A possible explanation is that he died overseas or some way from Mycenae, and that something was done to preserve his body so that it could be brought back to Mycenae. Beside his mask, which in style resembled the later one from Grave IV, and a plain gold breast-plate, he had a fine array of goods.⁵² On his right lay thirteen swords, the two closest having gold hilt- and scabbard-plates. In the same area were a great many gold and silver cups, a large silver jug with embossed spirals and grooving, once further embellished with niello,⁵³ and the gold plates of a hexagonal wooden box lay on either side of him, suggesting that it stood on his chest. He also had a stone cup, a gold band lay across his loins to which a sword-fragment was found still attached, and he wore a necklace of gold beads in the shape of

51. Mycenae and Tiryns, 296, and 297, fig. 454.

52. Mycenae and Tiryns, 298-300, 302-6, 308-11, 313-20; the last reference is less certain, but the language of the German edition, Mykenae (1878), 359-67, seems to support this view, and Schuchhardt, in Schliemann's Excavations (1891), 263, understood this for at least the metal cups.

53. A. Sakellariou, "Νέα μορφή παλαίων ἀντικειμένων τοῦ Ἐθνικοῦ Μουσείου", in ArchEph 1957, Chronika, 7-8.

double eagles pendent from a ribbed bar. It is possible that some of these goods may have belonged to the central burial and have been moved out of the way; but in this case one might expect them to be at his head or feet.

By contrast, the southern burial was not too well provided. Between him and the central burial lay a large group of weapons: Schliemann estimated that it contained over sixty entire swords, as well as lances and knives, but this may be an overestimation, for Karo's catalogue does not contain nearly as many. Schuchhardt estimated that the grave may have contained about sixty swords in all, and this may be nearer the truth.⁵⁴ The southern burial wore the famous 'Mask of Agamemnon' and a decorated gold breast-plate. He had fifteen swords, ten of which lay at his feet, at least one having very fine gold hilt-plates. By him stood two fragmentary silver vases and an alabaster jar with gold-plated bronze and wooden accessories, containing many gold and gold-covered ornaments. He also had a heavy gold arm-band, a necklace of amber beads, a pair of silver tweezers, gold tubes from a wooden staff or sceptre, various round gold plates and gold-covered buttons that were probably dress-ornaments, and seven alabaster sword-pommels.⁵⁵

Unassignable goods include seven copper vessels, lined along the western wall, a large ostrich-egg rhyton with attached faience dolphins,

54. Schuchhardt, op.cit. (supra, note 51), 264.

55. Mycenae and Tiryns, 301-2, 307-8; see also Appendix (2).

inlays from boxes or gaming boards, a simple pair of gold 'garters', like a pair from Grave VI,⁵⁶ fragments of more silver vases, two inlaid daggers, and other daggers with finely decorated blades.

Unusual finds were a wooden box with animals in relief on the side, an ivory mirror-handle and a glass bead.⁵⁷ As in IV, there were a few objects that seemed out of place, a chisel, three whetstones and a bone pin.⁵⁸

Only three whole vases were found in this grave, but they are more helpful for the chronology than those of IV. One was a squat four-handled jar, decorated in white and red on a red ground: this has a parallel from the Samikon tumulus in Triphylia, and belongs stylistically to the end of MH.⁵⁹ Another was a tall pithoid jar with spiral decoration, that may be dated LH IB.⁶⁰ The third was a plain jug of no value for chronology; fragments of fine bichrome and polychrome Matt-Painted vases, and one with a heavy white spiral on a dark ground, that may be MH III, were found in the fill, and may belong to this grave's burials.⁶¹ The gold cup and 'garters' noted

56. SG, Pl. 68:652, cf. 913.

57. SG, Pls. 145:812-3 (box), 136:785, and p. 141, figs. 58-9 (mirror-handle), p. 154, fig. 73:900, and 155, no. 900 (bead).

58. SG, 140, fig. 57:773 (chisel), ^{Pl. 71:898} ~~154, fig. 73:899~~ (bone pin), 149, nos. 859-61 (whetstones).

59. SG, Pl. 172:858; cf. Samikon, Pl. 20:α.

60. SG, Pl. 172:856.

61. MTh, 5, Pl. 7:36-8, 40-41.

show close connections with Grave VI.⁶² Thus the grave probably covered the period from the end of MH to LH IB: its latest burial was probably the southern one, which is arguably the latest male burial of any importance in the Shaft Graves. The much smaller grave under the Granary certainly seems to have been rich, like one or two in the Prehistoric Cemetery, but is not on a comparable scale;⁶³ its contents may once have resembled those of a rich chamber tomb. The 'Golden Treasure', although found in what may have been a shaft grave, need not itself have come from one, and is far more likely to be loot from one of the tholos tombs.⁶⁴

The 'royal' graves and the lesser graves of the same circle cover the end of MH and probably nearly all the LH I phase, a period of three or four generations. Circle B seems to have begun and ended earlier. It seems probable that Circle B was the original burial-ground of a group of ruling families, of which one raised itself above the rest and set up a new burial-ground, Circle A. The families that used Circle B may have changed to chamber tombs during LH I or have made burials elsewhere, or have died out: too few burials of comparable status can certainly be identified in the Early Mycenaean period for the sequence of events to be certain. However, the 'royal family' certainly seems to have taken up the tholos tomb as its normal type of grave at the

62. Supra, notes 12, 56.

63. Mycenae (BSA 25), 55-8.

64. H. Thomas, "The Acropolis Treasure of Mycenae", in BSA 39 (1938-9), 65-87.

end of LH I. This change seems to mark the end of an era; many characteristics of the Shaft Grave burials do not seem to be repeated later, and a certain flamboyance is lost.

(4) Discussions of the Material(i) The Grave-Stelae¹

The discovery of stelae led to the excavation of the grave circles, and it is therefore fitting that they should be discussed first. Examples were found over four of the late graves of Circle B, and over all but one of the graves of Circle A, as well as in and around the circle. In the case of Circle A, these were all found at the level of the LH IIIB reconstruction.² Lower down, in the fill of the graves, groups of slabs and other stone objects were found, as we have seen. These suggest that more complex monuments may once have stood over some of the graves: the 'altar' over Grave IV was certainly one such. These monuments might have been erected only after the final use of the grave, and their form cannot now be reconstructed.

The custom of erecting markers over graves has been found, though rarely, in MH cemeteries.³ It does not seem to have been common even in Circle B, although most graves had a mound over the mouth, held in by a ring of stones.⁴ Heaps of stones serving as markers

1. The major discussions are: W.A. Heurtley, "Mycenae: the Grave Stelae", in Mycenae (BSA 25), 126-46; S. Marinatos, op.cit. (supra, (1), note 29), 18-71, and "The Stelae of Circle B at Mycenae", in AthAA 1 (1968), 175-7.
2. Mycenae and Tiryns, 80-85, 88-96.
3. G.E. Mylonas, in Mycenae and the Mycenaean Age (1966), 93.
4. E.g. J. Papadimitriou, in Praktika 1952, 464-5 (Graves Zeta and Eta), 1954, 259 (Graves Sigma and Tau).

have been identified over Graves Eta, Zeta and Xi,⁵ and may once have stood over others, whose upper parts have been destroyed; but a number of rich graves do not seem to have had a marker of any sort. A stele, then, may not have been simply a more permanent marker, but something special. In support of this view, we may note that the decorated examples in both circles, when found in situ, faced west: it is a justifiable assumption that all the stelae did so, for certainly none were ever oriented north-south. This orientation conflicts with that of most of the burials in Circle B, and with the later position of the entrance in Circle A. It seems, therefore, to have some special significance, possibly religious, and incidentally reinforces the connection between the late graves of Circle B and those of Circle A.

The stelae in both circles were made of two closely related materials, shelly limestone and poros, a type of soft limestone. Quarries for poros, apparently in use in LH III, have been identified by Papadimitriou at Aspra Chomata, a site one and a half kilometres north of Mycenae: he also noted outcrops on the northern slope of Mycenae and on the slope north of Grave Circle B.⁶ The decorated examples of Circle B, the incised pieces and stele I of Circle A, and some bases, were made of poros, the rest, including the plain stelae, of shelly limestone. The reasons for this change are not

5. J. Papadimitriou, in Praktika 1953, 229.

6. J. Papadimitriou, in Praktika 1957, 107-8.

clear: but it seems that the earliest stelae were made of poros, and that this material was chosen for the only stele where there was some attempt to model the relief. It was commonly used later, whereas shelly limestone was very rare.⁷ The distinction does not seem to be of great importance.

The decorated stelae were consistently rectangular, varying in height from 1 m. to nearly 2, in breadth from 60cm. to over 1 m., and in thickness from 9 to 16 cm. The earlier stelae, those of Circle B, seem to have been rather broad and low, and were thinner than those of Circle A generally. All seem to have been fixed in a base made up of two slabs, forming a rectangle with a slot in the centre. It does not seem that any clear distinction can be made between those graves which had only a plain stele and those which had a decorated one: the problem is complicated, since in Circle A we cannot be certain that after the reconstruction of LH IIIB the stelae were placed over the same graves that they had originally surmounted. As I have noted in Section (3), there are discrepancies between the number of burials and the number of stelae. The evidence from Circle B has shown that plain stelae could be erected over both men's and women's burials (respectively in Graves Gamma and Omicron): it has also shown that the decorated stelae were not inviolate, for that which originally stood over Grave Gamma was later used as a base. Other stelae may well have been broken and discarded, or replaced.

7. Mylonas, op.cit. (supra, note 3), 114-5.

It is only possible, therefore, to consider the stelae from a stylistic point of view: their history must remain rather obscure.

The stele over Grave Alpha, and four fragments from Circle A that belong to two or more stelae, were decorated in incised technique. These showed scenes of action, enclosed with a double incised border. All the other stelae except stele I were decorated in flat relief, but on I some attempt was made to mould the relief. The relief-stelae were consistently divided into registers, both horizontally and vertically: some of these were filled with pure geometric decoration, in other cases the central register showed a scene of action; in one case it was plain (stele II) (See FIG. 18). The decoration was made up of running or interlinked spirals in groups, or of regular maeander-like wavy lines: stele III was decorated with four vertical registers of running spirals flanked by dots, a popular motif on Kytheran LM IA and early LH I pottery.⁸ (See FIG. 18). In two cases, the stele-fragments assigned to VI and VII, the central register showed rampant horses, one above another;⁹ These were used purely decoratively, like the friezes of birds on some of the Shaft Grave vases.

The scenes of action on the other stelae have been variously interpreted. Marinatos has argued very plausibly that the two stelae from Circle B show variations of the same scene, men coming to the

8. Mycenae (BSA 25), 130, fig. 29: cf. SG, Pls. 166:156, 172:356; the Kytheran pottery is unpublished.

9. Mycenae (BSA 25), Pl. 21.

defence of a bull that has been attacked by a lion or lions.¹⁰ (See FIG. 18 for reconstructed stele from Gamma). I believe that the fragments of incised stelae from Circle A could well have shown similar scenes: for a curved object on fragment Xa, by a man's hand but not grasped in it, could well be a lion's tail, and the object interpreted by Heurtley on fragment XIa as a horse's head could be the back part of a charging lion, while the staff-like objects over the 'head' could be spears, suggesting a lion-hunt.¹¹ These stelae may have been intended to show actual scenes from the dead man's life, or the sort of thing which he might have been doing; but, since it remains an unproved assumption that lions were to be found in mainland Greece, they might also have a symbolic meaning, or represent mythological scenes.

Some fragments from Circle A, grouped as stelae VIII and IX, show tantalising glimpses of scenes.¹² VIIla has two registers: on the upper, a wheel and spearhead may be distinguished, on the lower two men's heads, facing the same way, and a curving line which seems to enclose them, and was thought by Heurtley to be a sling or other weapon. VIIlb shows a horse's hoof, VIIlc the edge of a spiral. All have the same border, a flattened maeander between bars. IXa shows the legs of one man, maybe dead or wounded, behind the upper body of

10. Marinatos, op.cit. (1968) (supra, note 1).

11. Mycenae (BSA 25), 136-7, fig. 31.

12. Mycenae (BSA 25), 134, fig. 30.

another, who is leaning forward in a way that suggests that he is driving a chariot: a possible spear is levelled over his head. IXb shows a horse pulling either a chariot, both of whose wheels are shown, or a four-wheeled vehicle: above the horse's body is a line representing reins, above them what may be filling ornament. These fragments almost certainly show chariots and scenes of war, but they cannot be properly reconstructed.

The remaining stelae, I, IV and V, are far more complete than these.¹³ (See FIG. 18 for stele V). All stood over Grave V on the reconstruction-level, and in each the central motif was certainly a man driving a chariot. They have usually been taken to show scenes of war, but Mylonas has argued that they show chariot-races in honour of the dead.¹⁴ He argues that only one man is shown in the chariot, and that neither he nor his 'adversary' are properly equipped for war. He interprets the men on foot as men set to mark the turning-point in a race, and the object under the feet of the horse on Stele I as filling-ornament representing landscape, rather than an enemy prostrate under a shield. I believe that his last contention is certainly right, but am not convinced by his other arguments. These rely on the assumption that the intention of the sculptor was to portray a scene realistically: on these grounds, the scenes may be criticised if they are intended to show chariot-races.

13. Mycenae (BSA 25), Pls. 19-20.

14. G.E. Mylonas, "The Figured Mycenaean Stelae", in AJA 55 (1951), 134-47.

One might ask how one chariot can be thought to represent a race, why the driver in V carries a very prominent sword, and why the umpire or human turning-point on IV is levelling his staff in what one would imagine to be a very dangerous way, instead of holding it upright. Neither has Mylonas explained the presence of a lion chasing a deer or antelope on stele I, under the supposed 'race'. It is also possible to point out that on the Deer Hunt and Battle in the Glen gems, which are much more realistic than the stelae, certain details are missing, such as the reins and yoke of the chariot on the Deer Hunt, and shields in all but one case on the Battle in the Glen.¹⁵

I believe that to demand realism of the stele-sculptors is to make some large assumptions, and besides to miss the point. We cannot assume that the earliest Mycenaeans necessarily wore helmets, carried shields, or knew the best way to face a charging chariot, so that arguments on the equipment and actions of the figures is quite beside the point. The sculptors' intention was, I believe, to show a scene of the king or prince; thus, he is shown alone in his chariot, because he is the focus of attention, like the Egyptian Pharaoh.¹⁶ The absence of details that one might expect is surely due to the sculptors' poor technique, and to the limited space available. I do not think that an interpretation of stelae IV and V as war-scenes strains the evidence; stele I is more difficult, because of the animals.

15. CMS I, 22, 26-7.

16. Cf. V. Yadin, The Art of Warfare in Biblical Lands (1963), 192-3, 200, 216, 240-41.

It may show a hunting-scene, with the animals representing those which the king pursued; or it may show the king going forth to war, the animals being sculptor's short-hand for 'the king pursues his enemies as the lion his prey'.

It remains doubtful whether these scenes were intended to be representational or decorative. They could belong to the class of hunting and war scenes that clearly appealed to these early rulers. The horror vacui shown on several of the stelae, where completely irrelevant motifs were put into empty spaces, might also suggest that they were decorative, as the earlier stelae seem to have been. But it is also possible that they represent an adaptation of an already existing type to be truly commemorative. This adaptation might have happened under the influence of the vague knowledge that they erected stelae in Egypt, and we may note that a scarab of Tuthmosis I is remarkably similar in conception to the stelae:¹⁷ the appearance of some such piece at Mycenae might well spark off a new approach.

The crudity of the figured decoration of the stelae, compared with the sophistication of their geometric decoration, has often been noticed.¹⁸ Heurtley believed that the figured scenes 'could not conceivably have been produced by a Cretan artist', and connected their style and the division of the field into registers with the style

17. W. Stevenson Smith, Interconnections in the Ancient Near East (1965), fig. 34a.

18. E.g. Mycenae (BSA 25), 144-5.

of late Matt-Painted pottery. However, this is to beg the question: we have no reason to assume that the first essays of a Cretan artist in a new medium would be any less crude than anyone else's. I have suggested in my survey of the MH world that we cannot expect much of a MH craftsman in the way of 'art'; figured scenes of any sort are almost non-existent on MH pottery, and rare on the contemporary Cycladic pottery,¹⁹ although both could be decorated with friezes of animals or plants. The scenes of violent action belong to the genre that was most probably produced by Cretan craftsmen because they were to the taste of the Shaft Grave rulers. The workers of gold gems and sealstones were experienced at working into a surface, the metalworkers at producing decoration in relief: either might have been able to design the stelae, but, whereas the decoration might be simply enlarged and remain well-done, the figured scenes presented problems that were not entirely overcome. Their crude appearance may be partly due to their being required in a hurry: this would account for the unfinished state of the background of Stele I, and for the lightly incised motif, irregularly placed, at the bottom of stele IV.²⁰ In their rather battered and often broken state, the stelae make less impression on us than they might have done if complete: but there is no reason to believe that those who commissioned them were not perfectly satisfied with them, accepting them as typical scenes rather

19. Cf. Aegina, 19, fig. 22, and Phylakopi I, Pl. 22.

20. Mycenae (BSA 25), 129, 131.

than as faithfully accurate representations.

The stelae have no contemporary parallel, and seem to have left no certain descendants. Fragments of a stele from Dramesi in Boeotia, which had incised representations of ships on three sides, cannot be closely dated:²¹ moreover, this was more in the nature of a column, with faces 54 and 43 cm. wide. A fragment of a stele from Kea showed the incised head of a warrior in an extremely lifelike style:²² again, it cannot be closely dated, although it certainly belongs to the Late Bronze Age. A few stelae and columns were found in chamber tombs at Mycenae and Ialysos:²³ these were decorated with simple incised geometric decoration, over which in the case of the example from Mycenae registers of naturalistic decoration, including marching warriors and a frieze of deer, had been painted. None of this material can be shown to derive from the Shaft Grave tradition. It seems that when the more monumental tholos tomb was adopted, the need for memorial stelae was no longer felt; thereafter they appear in Mycenaean contexts as a rarity.

I have noted above that vague ideas of Egyptian practice may have influenced the decoration of the stelae; however, I do not think that the practice of erecting them can be considered to derive from there. The earliest, in Circle B, antedate any suggestion of contact

21. C.W. Blegen, "Hyria", in Hesperia Supplement 8 (1949), 41-2.

22. Caskey 1966 C, Pl. 90b.

23. ArchEph 1896, Pl. 1, 2:2 (Mycenae stelae); A. Maiuri, "Jalisos", in ASAtene 6-7 (1925-6), 208, fig. 131.

with Egypt. I believe that it is more likely that the custom grew out of the (admittedly rare) habit of erecting grave-markers, and that the decoration, at first purely formal, was adapted to show scenes of the sort that the dead man might have partaken in when alive. It was, like so much else connected with the Shaft Graves, peculiar to them, and seems to have disappeared with them.

(ii) Weapons and Implements¹

One of the most significant developments for which the Shaft Graves provide evidence is in the field of weapons. We have seen that weapons were rarely found in MH graves, most often in the north and west: they consisted of daggers, one-edged knives, sets of arrowheads, and occasionally spearheads of a rather clumsy type. All these weapons were small, rarely exceeding 20 cm. in length, and could have been used as much for hunting as for war. All but the daggers were certainly produced by native craftsmen, for they have no close parallels elsewhere in the Aegean: the daggers were closely related to Cretan types, and some may have been imports. Only one type was at all common, a short broad blade with three rivets across a straight heel (see FIG.16). The local metallurgy of the north and west, perhaps based on the exploitation of local copper ores, seems to have been more successful and inventive: at all events, the spearhead and one-edged knife seem to have centres of production here.

The material from the Shaft Graves provides an almost complete contrast with this picture. Most of the male burials in Circle B, and all of those in Circle A, were provided with weapons, often in great numbers, and these were mostly of new types. They include not only new and larger forms of dagger but also the long spear and, most important of all, the long sword and rapier; various battle-knives may also be identified. The native weapons scarcely appear: one example

1. SG, 194-224.

of the 'shoe-slot' spearhead was found in Grave IV, and sets of arrowheads in Graves Lambda, Delta and IV.² The earliest burials in Circle B resemble the MH burials in being provided with only one weapon apiece, a dagger in most cases but in Grave Zeta a long sword. However, male burials were soon provided with miniature armouries, and so many weapons are found in Graves IV and V that one might suspect that these, and swords in particular, were a form of wealth.

The sword was the commonest weapon to be found, and it was clearly both the most favoured and the most prestigious. The earliest example to be found was that in Grave Zeta; this belonged to Karo's and Sandars's Type A, as do the majority of swords from the Shaft Graves³ (see FIG. 19). The Type A sword was a long narrow rapier with round shoulders, a high, usually sharp midrib, and a small tang. Rivet-holes in the tang and sometimes the shoulders were used to attach the handle. This type was quite certainly Cretan: early examples have been found in the Mallia palace and in a hoard in the Arkalochori cave, the latter all 1 m. long or more,⁴ and whatever influences were involved in its development, it seems to have been

2. SG, Pl. 102: 463 (spearhead); Pl. 101: 536-40, and G.E. Mylonas, in Ancient Mycenae (1957), 140, l.7.

3. N.K. Sandars, "The First Aegean Swords and their Ancestry", in AJA 65 (1961), 23.

4. F. Chapouthier, Deux Épées d'Apparat Découvertes en 1936 au Palais de Mallia (1938); S. Marinatos, "Ausgrabungen und Funde auf Kreta 1934-1935", in AA 50 (1935), 249-54, with fig. 5.

perfected in Crete.⁵ The earliest examples at Mycenae might have been imported, but the great variety in the blades, the existence of a class of decorated ones, and the evidence of further development provided by the Type B sword, make it virtually certain that the rulers of Mycenae had their own smiths, presumably Cretans.

The earliest weapons seem to have been the longest: the average length of the Circle B blades was 90 cm., and one fine sword from Grave Delta was 94.5 cm. long.⁶ A few of those in Circle A were as long, but the majority seem to have varied between 70 and 85 cm. in length, and were often less stout.⁷ The finest swords had their blades decorated in some way: grooved or ribbed midribs were common. Others had decorated midribs: in one case ivy-leaves flanked it, in another it was covered by interwoven bands, in a third it was flat and surmounted by a row of figure-of-eight shields, flanked by spirals.⁸ Yet others were decorated on the blade itself: some had simple spirals, but others had running horses or griffins, or a single motif at the heel.⁹ It was commonplace for rivets to be plated with gold or

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5. Sandars, op.cit. (supra, note 3), 13-22, and K. Branigan, "A Transitional Phase in Minoan Metallurgy", in BSA 63 (1968), 195-8.
 6. Mylonas, op.cit. (supra, note 2), 140 Grave (Delta sword), and Grave Circle B of Mycenae (1964), 6 (average).
 7. Sandars, op.cit. (supra, note 3), 23.
 8. SG, Pls. 85, 98:428.
 9. SG, 101, fig. 34, Pls. 80:748, 81:727, 92:751; G.E. Mylonas, Mycenae and the Mycenaean Age (1966), fig. 95; J. Papadimitriou, in Praktika 1951, 203 (blades from Alpha), 1952, 457, fig. 26.

silver: finely decorated gold hilt-plates were also found.¹⁰ The pommel, which was large, would be of ivory, alabaster or gold-covered wood. The scabbard, of wood or leather, might also be covered with gold plates; and gold even seems to have been used on two of the finely decorated blades.¹¹ Some of these blades may well have been show-pieces, but only those with elaborately ornate hilts or gold-ornamented blades might lose in value if actually used.

The major defect of the Type A sword was its weakness at the junction of tang and blade, and the Type B sword seems to have been developed to avoid this weakness (See FIG. 19). This was a shorter and broader blade, with square flanged shoulders and a stouter tang, usually also flanged. Sandars has argued that the flanging is Levantine in origin, but Branigan has pointed out that some MM daggers had this characteristic, and believes that the Type B sword was developed in Crete.¹² So far, hardly an example of the Type B sword has been found outside the Argolid, and the great majority have been found in the Shaft Graves. Moreover, the Shaft Graves contain weapons that must be considered early attempts at this type, of much shorter length. It seems most likely to me that this type was developed at Mycenae, in answer to a need for a more securely hilted sword: but it

10. The best example is the Grave Delta sheath, Praktika 1952, 457, fig. 26.

11. ΣΓ, 99, nos. 402, 404; cf. Mylonas, ibid, (supra, note 9).

12. Sandars, op.cit. (supra, note 3), 22-4; Branigan, op.cit. (supra, note 5), 192-5.

does seem probable, since the flanged shoulder was known in Crete, that the idea was brought from there rather than directly from the Levant.

Early weapons with flanged shoulders were found in Graves Delta, Alpha and Gamma, and a single type B sword in Grave Gamma: those from Graves Delta and Alpha were 30 and 35 c.m. long respectively. The latter was an ornate weapon, which was inlaid with a spiral-decorated plate, probably of silver.¹³ In Grave VI two short swords, 41 and 45 cm. long, and a dagger with shoulders that are almost horned, 30.5 cm. long, were found.¹⁴ But the finest examples of the Type B sword were found in Graves IV and V, where there is evidence for up to a dozen. These were less ornate than the Type A swords, but most had gold-plated rivets. The Grave VI weapons merely had an oval thickening in the centre of the blade, but the long swords had midribs, usually rounded: these were most often grooved along their length, but one had deep horizontal notching and another groups of curving ribs in relief over the midrib.¹⁵ Several had fine gold hilt-plates, two in Graves IV and V having identical hilts, and one had ivory hilt-plates decorated with linked swastikas made up by gold nails.¹⁶ They

13. Mylonas, op.cit. (supra, note 9), 101.

14. SG, Pl. 95: 904-6, discussed by Sandars, op.cit. (supra, note 3), 24.

15. SG, Pls. 73: 398, 80:752.

16. SG, Pls. 73: 398, 407, 435, 81:723 (this and 407 are identical), 87:435 (gold and ivory).

varied considerably in length, one being as long as 83 cm., others only 57 cm. Their comparative rarity may mean that only a few smiths, perhaps only one man, could make them: their ornate hilts show that they were valued weapons.

The Type B sword remained too long, and potentially weak at the hilt, for the delivery of a good cutting-stroke. A need seems to have been felt for a weapon that could, however, and various experiments seem to have been tried. The wide range of long daggers, some of which approximated to short swords, suffered from a similar weakness in the hilt. An extraordinary weapon in Grave VI, once believed to be a halberd,¹⁷ seems too broad to have been used for anything but a cutting stroke: it appears to be an enlarged version of an ogival dagger, but had a clumsy arrangement of five rivets along its heel and a very thin tang containing a further rivet. Some heavy one-edged knives look far more efficient:¹⁸ and it was from this type that the 'Slachtmesser' seems to have been developed (See FIG. 19).

At least 11 examples of this were found in Graves IV and V, 9 of them in IV: all had one gently out-curving edge, a straight back,

17. SG, Pl. 95:928; the scale makes it clear that its length must be c. 33 cm., as stated by Blegen, "The 'Halberd' from the Sixth Shaft Grave", in Ἐπιταφίον Χρήστον Τσούνη (1941), 423-8, rather than 53 as Karo states in the text (p.162).

18. SG, Pl. 99:461; an unpublished example from Grave Gamma is visible in Praktika 1952, 445, fig. 13, behind the central burial's head.

and a hilt cast as a part of the blade.¹⁹ The hilt was a flat piece of metal that was beaten into a tube, with a ring attached at the end. Some examples had no ring, and in one case the metal was beaten around a wooden haft.²⁰ Complete examples of the ring-ended type were as long as 66 and 70 cm., and none seem to have been much less than 50. These look formidable pieces, and in view of their great size were surely weapons. They would have been admirable for use from a chariot, where a weak-hilted long sword would be difficult to use and a long spear most unwieldy. The ring on the end of the haft could have served to hold a thong that attached the weapon to the wrist, so that it would not be lost. For some reason, this eminently practical weapon was not favoured: only a few related blades have been found elsewhere, all in early contexts, while the long rapier continued in use past the end of the Middle Mycenaean period.

Various daggers and short swords have already been noted. The earliest type, the short broad blade, appeared in Grave Eta, and derivatives continued to be found in Circle B. The ogival dagger, with square shoulders and incurving sides (see FIG. 19), another Cretan type,²¹ was common: examples include the fine inlaid daggers,²²

19. SG, Pl. 97:443, 445, 447, 450.

20. SG, 104, no. 450.

21. Branigan, op.cit. (supra, note 5), 193, fig. 3, shows various early forms.

22. SG, Pls. 93-4.

others with inlaid plates in the blade,²³ and some examples with decorated midribs.²⁴ Two early examples, in Graves VI and II, were triangular, with curved heels and a triangular arrangement of rivets in the heel.²⁵ Many of the examples from Grave IV and V were so finely decorated that they were probably purely for show. Most were over 25 cm. long, and thus in keeping with the general picture of large weapons: one or two were over 40 cm. long, and thus comparable to the short swords from Grave VI.²⁶

The spear was more often found in the non-royal graves, but was never common (See FIG. 19). We have already noted one example of the MH 'shoe-slot' type in IV; this grave also contained a short blade with curving sides, a high midrib, and a socket formed out of a flat piece of metal beaten into a tube, and another similar socket.²⁷ This type is the same as the long blade, of which Grave IV contained at least one example;²⁸ Grave VI held four, and Graves Lambda, Nu, Gamma, II and V one each. These varied in length, and some had rings around the socket to hold it in place, while on all the socket was

23. SG, Pl. 91:744, 746 (p. 135), 753 (p. 137); Mylonas, ibid. (supra, note 13).

24. SG, Pls. 82:736, 89, 91:747.

25. SG, Pls. 72:217, 95:927.

26. Mylonas, op.cit. (supra, note 2), fig. 63a (following scale, c. 42 cm. long); SG, Pl. 91:747.

27. SG, Pl. 97:448.

28. SG, Pl. 97:449.

nailed to the shaft:²⁹ but on nearly all the blade alone was 20 cm. long or more, and the socket rather longer. The Battle Krater, Lion Hunt Dagger and Battle in the Glen gem show that these spears had very long shafts and that they were used for the thrusting-stroke, which seems normally to have been delivered overarm. These could have been terrible weapons in the hands of warriors as tall as some of the Shaft Grave men, but they do not seem to have been particularly highly regarded; the evidence from Grave Circle B shows that they could have a gold band around the haft, but they were not otherwise embellished. The example from Grave II had a ring attached to the socket, and Schliemann illustrates another as coming from Grave IV:³⁰ this seems to have been a refinement, holding a thong that helped secure the blade to the shaft.

A wide variety of knives and broad blades that have been called 'razors' was found. These have no special interest: we may note a curving blade from Grave V with a flanged haft and a miniature Slachtmesser from Grave IV.³¹ All the others were secured to their hafts by rows or groups of rivets. The 'razors' were two-edged, with out-curving sides and three rivets across the heel:³² these were sometimes plated with gold or silver, which suggests that these blades

29. SG, 207.

30. SG, Pl. 72:215; Mycenae and Tiryns, 279, fig. 441.

31. SG, 140, fig. 57: 738; Pl. 102:458.

32. SG, 140, fig. 57: above 723.

were more important than they might appear, perhaps yet another type of weapon. Some tools were also found in Graves IV and V: these included some chisels, of an old Aegean type but long-tanged like the Cretan ones,³³ a long four-edged tool that also seems to have been a chisel, a socketed trident and a peculiar object that might be an axe.³⁴ Whetstones were found in Graves Delta, VI, IV and V, and 'arrow-polishers' in Grave VI.³⁵ I have noted the presence of sets of arrowheads in Graves Lambda, Delta and IV: these seem to have been of local flint and of obsidian, while two bronze ones are reported from Grave Delta.³⁶ They varied slightly in shape from the old MH type to the new 'Mycenaeen', elongated with curving sides and barbs turned in (See FIGS. 6 and 19). The presence of some of these prosaic objects in royal graves is difficult to explain, unless we assume either that the intention was that the dead should lack nothing, or that these objects were put in simply because they were possessions of the dead.

Assuming that the distribution of weapons reflects the reality of warfare, we might say that the sword seems to have been the most popular weapon, as it was also the most aristocratic. The various battle-scenes on the gems and sealstones tend to support this view: but

33. SG, 140, fig. 57:773, Pl. 98:438.

34. SG, 103, Pls. 98:437, 102:514-5.

35. J. Papadimitriou, in Praktika 1953, 457 (Delta); SG, 149, nos. 859-61 (V), 163, fig. 79 (VI), Pl. 102:512 (IV).

36. Papadimitriou, ibid. (suora, note 35).

on the Battle Krater, which seems in many ways the most realistic, two groups of warriors, fully protected with shield and helmet, fight with spears, each group including one helmeted bowman.³⁷ Possibly the sword was largely used in semi-ritualised duels, and may have been a symbol of rank. But to the average MH villagers, armed at most with a rather clumsy spear and more often with a short dagger or knife, these swords must have appeared most formidable, particularly when wielded by considerably taller men. The first successes of the rulers of Mycenae were surely achieved to some extent by terror; when the opposition was stiffer or became more organised they may have set their smiths to the production of more efficient weapons, and developed a more controlled style of fighting. The great quantities of swords in Graves IV and V may reflect a situation in which the leader provided his men with weapons: this can be paralleled from various 'heroic' societies. The range, quantity and quality of these weapons gives a good indication of the warlike nature of these men.

37. A. Sakellariou, "Un Cratère d'Argent avec Scène de Bataille Provenant de IVème Tombe de Mycènes", in First Mycenological Congress I, 262-5.

(iii) Jewellery and Ornaments¹

In the MH graves of eastern Greece, jewellery and small ornaments were quite common: necklaces, earrings, finger-rings, hair-pins, circlets and spirals for the hair, and probably dress-pins, were found, nearly always in the graves of women and children. In Circle B, all these classes were found, together with large ornaments of gold plate. In Circle A, crowns and diadems were worn by several of the women: some of the men seem to have worn necklaces, and there is a wide range of dress-ornaments. The full range of the jewellery and ornaments found is listed in the Appendix: my intention here is to consider the possible parallels and connections of the various classes of ornament, and the evidence provided by them for the appearance of the ruling class of Mycenae.

In a general way, much of the Shaft Grave array belongs to an old Aegean tradition of ornaments. Dress-pins, head-bands and stone beads were found in rich EB tombs:² a wide range of ornamental objects was found in the EM tombs of Mochlos, and fragmentary remains from the palace sites and various tombs show that this range was continued in MM times.³ It has been suggested that the 'Aegina Treasure', a fine collection of gold ornaments, is tomb-robbers' loot of Cretan origin

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1. The main discussion is by Karo, in SE, 173-94; R.A. Higgins, Greek and Roman Jewellery (1961), 69, 71-2, 77, 81-6, collects all the material.
 2. Higgins, op.cit. (supra, note 1), 49-53.
 3. Higgins, op.cit. (supra, note 1), 55-67.

and MM III - LM I date, on the grounds of parallels with finds from Chrysolakkos at Mallia and with the Shaft Graves.⁴ If so, this is the only considerable collection of jewellery of the period immediately preceding and partly overlapping with the Shaft Graves. A tomb at Poros, near Heraklion, has also produced MM III - LM IA jewellery.⁵ These provide interesting evidence of the techniques known to Cretan jewellers, but an almost complete lack of parallels with Shaft Grave goods. Comparable material is also lacking from the Cyclades, apart from a single child's burial on Kea, provided with gold and stone beads, and a tiny gold band with triangular holes.⁶

Various-shaped gold bands with repoussé decoration, generally of dots, filled circles, spirals, and rosettes, were the first ornaments of any size to appear (See FIG. 28). They are probably connected with the old Aegean tradition of head-bands; but the closest parallel is from a grave at Assur that cannot be more closely dated than to the Old Assyrian period (c. 1900-1500 B.C.).⁷ This was small, but was decorated with groups of repoussé concentric circles with a central dot, flanked and divided by rows of dots. Even smaller bands in this grave were decorated with rows of dots only. An example from

4. R.A. Higgins, "The Aegina Treasure Reconsidered", in BSA 52 (1957), 42-57.

5. A. Lembesi, in Praktika 1967, 205-6.

6. Caskey 1966 C, 367.

7. A. Haller, Die Gräber und Gräfte von Assur (1954), Pl.10a:centre.

the Aegina Treasure was plain:⁸ one from a MH grave at Corinth had more complex decoration of dot-surrounded circles and rosettes (see FIG.15). Other head-bands from LM tombs⁹ are not closely related, nor is the Kea one. The relationship between the Assyrian and Aegean examples remains obscure, but it seems probable that the former is in some way ancestral to the latter, or an independent development from the same unknown ancestor.

The oval shape was the most popular; some straight-sided bands and ornaments were also found, a type also represented in the Aegina Treasure,¹⁰ and half-ovals were found. 'Stars' made up of crossed double-bands and thin strips were popular.¹¹ Crowns with a straight lower edge and curving upper edge were developed.¹² Another type was the 'garter', a roughly T-shaped ornament.¹³ Heavy rectangular arm-bands were found in Graves IV and V, one still on an arm-bone,¹⁴ and true armlets in Graves Alpha, Omicron, III

8. BSA 52 (1957), Pl. 13a: centre.

9. Higgins, op.cit. (supra, note 1), 60-61.

10. SG, Pls. 14:3, 17:37. 35:184, 36, 38 (oval bands); Pls. 39:236-9, and G.E. Mylonas, Ancient Mycenae (1957), figs. 63, 78 (straight bands), cf. BSA 52 (1957), Pl. 13a: top and bottom; SG, Pls. 14:5, 15:7, 35:185, 187 (half-bands).

11. SG, Pls. 14:25, 16, 35:188, 46:385.

12. SG, Pls. 12, 41.

13. SG, Pls. 67:267-8, 68:652, 913; Mylonas, op.cit. (supra, note 10), fig. 42.

14. SG, Pls. 43:255, 257, 56:649-50; cf. Mycenae and Tiryns, 302, fig.459

and IV.¹⁵ The oval bands often had loops at either end for attachment round the head: the largest, from Grave III, was certainly worn as a diadem, and a small one was worn by the man in Grave II.¹⁶ Other shapes were pierced with holes for attachment to clothing: such pieces were found with the earlier burials in Graves Lambda and Nu, while a band was found on the collar-bone of the central burial in Nu, presumably worn on the collar of a garment, and the central burial in Grave Iota had a pair of triangular ornaments at each wrist and two 'garters' in the abdominal area.¹⁷ A 'garter' was found on the shin-bone of a burial in Grave IV.¹⁸ Three burials in Graves IV and V also wore gold breast-plates, all pierced for attachment.¹⁹ Taken together, the evidence suggests that the men wore tunics or corslets sewn with large gold ornaments: the 'garters' may have decorated the short leggings which the earliest Mycenaeans seem to have worn for war or hunting,²⁰ but cannot have been grave-ornaments, since greaves are not shown in these representations. The women wore crowns and head-bands; the sets of half-bands were probably, as

15. SG, Pls. 21:63-7 (Omicron ones similar), 42; Praktika 1951, 202, fig. 8.

16. SG, Pls. 13, 72:219.

17. Mylonas, op.cit. (supra, note 10), 150-51 (Nu), 152, fig. 72 (Iota), 156, fig. 78 (Lambda).

18. Mycenae and Tiryns, 230, fig. 338 (confirmed by M.S.F. Hood, "Schliemann's Mycenae Albums", in Archaeology 13 (1960), 65).

19. SG, Pls. 54-5.

20. E.g. SG, Pl. 94:394; CMS I, 20, 27.

I have suggested above, dress-ornaments, and could have been worn below the waist on a stiff flaring skirt. The 'stars', usually found in sets of three, were probably worn attached to the head-dress, as in Graves Xi and IV,²¹ but might also have been worn at the shoulder, like the rosette in Grave Omicron.²²

The decorated round gold plates and gold-plated roundels and discs from Graves III, IV, V, and Omicron (see FIGS. 22-3), seem to have served both as dress-ornaments and as ornaments of scabbards, shield-straps, baldrics and possible belts and bridles or horse-trappings. The greatest quantity of plates was found in Grave III, where they covered the bodies;²³ there were many sets of fifty or more, not all of which had attachment-holes. Several examples from Grave V were also found on the bodies.²⁴ None of the roundels or discs had attachment-holes, and they must presumably have been glued on in some way: they sometimes formed small sets, but were often single examples of one type of decoration. Examples in Grave V were certainly closely associated with swords.²⁵ Even more certainly to be identified as dress-ornaments are the gold cutouts in Graves III and IV, which seem to have been sewn or glued to full-length robes (See FIGS. 24-5): sets vary in

21. Mylonas, op.cit. (supra, note 10), fig. 63; SG, Pl. 41:230.

22. Supra, p. 202.

23. Mycenae and Tiryns, 165-73.

24. Mycenae and Tiryns, 296, 300, 306, 308.

25. Mycenae and Tiryns, 302-3, 305.

number from over sixty to a pair. These nearly all had human or animal subjects, generally rather stiffly symmetrical in style. Contemporary parallels are almost impossible to find elsewhere in the Aegean.²⁶

Long dress-pins and earrings, continuing the MH tradition, were found in the women's graves (see FIGS. 26-7). The evidence from Grave Omicron, and the fact that Schliemann found some of the pins on bodies,²⁷ makes it certain that the larger pins were dress-pins. They were not universally found, however: no pins or earrings were found in Grave I, and no earrings are attributable to the women's burials in Grave IV. The best examples of earrings, from Graves Omicron and III, are in fact clips, but one granulated set in III are true earrings.²⁸ None of this material has close parallels in Crete, where the ear-clips are of a different type and the pins smaller, probably hair-pins.²⁹ A single long pin with rock crystal head was found in Grave Alpha.³⁰

The range of beads in the Shaft Graves is very wide. The globular and elongated beads of semi-precious stones, popular in MH graves, appeared most often in the Circle B graves: amethyst occurred

26. BSA 52 (1957), Pl. 9f; P. Demargne, Fouilles Exécutées à Mallia: Exploration des Nécropoles (1921-1933), I (1945), Pls. 65, 67:1.

27. Mycenae and Tiryns, 193; Mylonas, op.cit. (supra, note 10), 144-5.

28. Mylonas, op.cit. (supra, note 10), fig. 58:top; SG, Pls. 20:53-5, 61 (true earrings).

29. Higgins, op.cit. (supra, note 1), 61, 67, 72-3.

30. Praktika 1951, 203.

as well as carnelian and rock crystal, known from much earlier.

Amber beads, mostly discoid with a few rectangular spacer-plates, appeared in great numbers in Graves Omicron, III, IV and V, and two beads were found in I: examples tested spectrographically have all proved to be 'Baltic' amber.³¹ The spacer-plates in Omicron, and probably those in the other graves, were of the complex-bored type, found in Britain and Germany,³² a strong indication that the necklaces were imported. A few faience and glass relief-beads and some simple tubular glass beads were also probably imported: they include a type widespread in the Near East.³³

The majority of necklaces, however, were made up of gold beads. Tubular beads with attached spirals of wire, found in Graves Omicron and III, are variants of a type widespread in the Near East and may be related to other wire-spiral ornaments in the same graves, armlets and ear-clips, as well as to some ornaments from a MH-LH grave at Thebes, to form a single class whose origins are probably Near Eastern.³⁴ A necklace of relief-beads that probably represent palm-branches, from

31. C.W. Beck and G.C. Southard, "The Provenience of Mycenaean Amber", in First Mycenological Congress I, 59.

32. R. Hachmann, "Bronzezeitlicher Bernsteinschieber", in Bayerische Vorgeschichtsblätter 22 (1957), 1-36.

33. Mylonas, op.cit. (supra, note 10), fig. 63 (centre), pp.147, 158 (faience); SG, Pls. 20:71, 150:209, p. 154, fig. 73: 900 (glass), cf. Haevernick, op.cit. (supra, (3), notes 25, 37).

34. Cf. AthAA 1 (1968), 10, figs. 14-15; Higgins, op.cit. (supra, note 1), 69, 81-2. (See FIG. 26)

Grave Omicron, has good parallels in the Aegina Treasure.³⁵ Several types of relief-bead were made up of cutouts joined back to back: a single necklace of these was found in Grave V.³⁶ Grave III held five globular beads decorated with single grains, primitive examples of a type better represented later.³⁷ Some gold gems and sealstones in Grave III may have been worn in necklaces, like the sealstones from Graves Omicron and Mu:³⁸ the seal-rings might also have been worn on necklaces or strung separately. No general conclusions can be drawn from this mixed array, except that jewellery seems to have been governed largely by personal taste, and there was no accepted tradition. the relief-bead is represented in Crete, although the types there are different:³⁹ but the fine pendants of the Aegina Treasure and Chrysolakkos at Mallia, often decorated with fine filigree and granulation, are not found in the Shaft Graves, a single pin-head from Grave III being the nearest parallel⁴⁰ (see FIG. 27).

All this evidence suggests that some distinction may be made between the ruling classes of Mycenae and of Crete in the matter of dress.

35. AthAA 2 (1969), 213, fig. 3; cf. BBA 52 (1957), Pls. 12:a-b.

36. SG, 50, nos. 38-40, 51, nos. 51-2, 55, nos. 77, 79, cf. also p.190, note 1 (Grave III); from Grave V is SG, 128-9, no.689 (fig. 48).

37. CMS I 20-24, cf. Lylonas, op.cit. (supra, note 10), 155 (Mu), fig. 58 (Omicron: sealstone visible on necklace).

38. CMS I, 26-7; SG, Pl. 99:23.

39. SG, Pl. 66:689, p. 137, nos. 757-9.

40. SG, Pl. 30:75, cf. BBA 52 (1957), Pl. 9:a-b.

Representations on frescoes, sealstones and stone vases show that not only necklaces, but armlets and wristlets were worn in Crete:⁴¹ long robes are sometimes worn by men, perhaps priests.⁴² But the 'Minoan court dress' of tight jacket, open bosom and flounced skirt does not seem to have been worn by the women of Mycenae: they wore full-length robes, pinned at the shoulder and often decorated with gold plates, gold-plated buttons or cutouts. The heavy crowns and head-bands are not found in Crete, although crowns of a sort are certainly in evidence.⁴³ Cretan men of importance are often shown naked to the waist: but the remains from the Shaft Graves suggest that heavy gold-plated tunics or other garments could be worn by the men. A distinction has also been noticed between the Cretan loincloth and cod-piece and the mainland leggings. It is possible to argue that much of this finery was for the grave, as the death-masks certainly were: but the stoutness of the gold plate in some cases and the elaborate decoration of the objects argue against this. A 'barbaric' love of finery and desire for display may be discerned in the great quantities of ornaments, their large size, and their wide variety. Cretan influence may be traced in many of the motifs and types, but the ensemble does not seem Cretan: this has a bearing on the degree of 'Minoanisation' that the mainland rulers underwent.

41. E.g. C. Zervos, L'Art de la Crète (1956), 366-7, figs. 536-7, 412, fig. 634; PM II, Pls. 12 (facing p. 707), 14 (frontispiece to Part 2); PM III, 214-7, figs. 145-6, 148, Pl. 21.

42. Zervos, op.cit. (supra, note 41), 412, fig. 634; V.E.G. Kenna, Cretan Seals (1960), Pl. 11:293; cf. also PM I, 505, fig. 363:a.

43. PM I, 501, fig. 359, 504, fig. 362, 505, fig. 363; PM II, Pl. 14 (frontispiece to Part 2).

(iv) Vases and Vessels of Precious Materials¹

Vases of metal and other precious materials began to appear as grave-goods in the Shaft Graves after weapons and jewellery: all those of Circle A contained examples, but only the richest of Circle B. Metal vases first appeared in the Aegean in the EB II phase, and were certainly known in Crete by EM III.² The stone vase industry was established in Crete from EM II,³ and the Temple Repositories at Knossos show that fine work in faience, including vases, was being produced in MM III.⁴ All these classes appeared at Mycenae, together with wooden objects, generally plated with gold or inlaid with various fine materials, that may also be paralleled in Crete.

The earliest metal vases, in Circle B, include varieties of the 'Vapheio cup' in gold, silver and bronze, jugs of silver and bronze, and large vessels of copper:⁵ apart from the copper vessels all were small, and look a bit flimsy. A silver jug may be paralleled in clay

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1. Major discussions are by Karo, in SG, 224-51, and by D.E. Strong, in Greek and Roman Gold and Silver Plate (1966), 33-44.
 2. Strong, op.cit. (supra, note 1), 27-33.
 3. P.M. Warren, "The First Minoan Stone Vases and Early Minoan Chronology", in KC 19 (1965), 8-9.
 4. PM I, 498-9, figs. 356-7.
 5. Praktika 1951, 201, fig. 6 (silver jug), 1952, 451, fig. 19 (gold cup), 1953, 215, fig. 5 (silver cup), 228, fig. 14 (gold cup); cf. also Appendix (1).

at Knossos,⁶ while the 'Vapheio cup' had been a Cretan vase-shape since MM III and had been introduced on the mainland in the Late Phase of MH,⁷ and the copper vessels belong to a well-known Cretan class. Vases of other materials were found: a faience cup from Grave Alpha resembles two from the Temple Repositories,⁸ and a stone pyxis from Grave Nu is a Cycladic type, otherwise known in Crete in EM contexts.⁹ A rock crystal bowl from Grave Omicron is without close parallel: the duck's head handle is an Egyptian type, while the bowl's shape can be paralleled in Crete.¹⁰ These are surely imports, as some of the metal vases may be.

In Circle A, Graves VI and II contained a small flimsy gold Vapheio cup each, closely similar to one another and to a cup from Grave V:¹¹ all had a double grooved rib at the middle and base, and were decorated on the upper body with an arcade motif (see FIG.27 for an example). Both graves also held fragments of other precious vases,

6. C. Zervos, L'Art de la Crète (1956), 229, fig. 300.

7. Strong, op.cit. (supra, note 1), 36; supra, Ch. II (3) The MH Pottery, note 49.

8. PM I, 499, fig. 357.

9. Warren, op.cit. (supra, note 3), 14, note 3.

10. G.E. Mylonas, Ancient Mycenae (1957), figs. 60-61; cf. P.M. Warren, "Minoan Stone Vases as Evidence for Minoan Foreign Connexions in the Aegean Late Bronze Age", in ProcPS 33 (1967), 44 (no. 24), and for shape, Zervos, op.cit. (supra, note 6), 157, fig. 160: left, 161, fig. 177, 398, fig. 568 (clay, attached to larger vase).

11. SG, 161, fig. 78, Pl. 170:220, cf. Pl. 123:627; their weights are respectively 23.1, 26.55, and 35.2 grammes (SG, 167-8).

VI a bronze cauldron-handle and fragments of a large bronze and small silver jugs,¹² II fragments of large bronze vases and an ivory vessel, and a complete faience jar,¹³ which is an import from Egypt.¹⁴

Similar but richer finds, probably of advanced LH I date, were made in Grave I, a silver cup, the gold-plated rim of another, fragments of a large bronze vase, two largely complete and several fragmentary faience vases, and several fragments of ivory vessels.¹⁵ The cups are shallow rounded types, the complete faience vases tallish narrow-mouthed jars, rather like the Egyptian alabastron-shape that was adopted as a LH IB vase-shape.¹⁶ The assemblages in VI and II resemble those of Circle B, that of Grave I the later finds in tholoi and chamber tombs, where shallow metal cups and ivory vases are often found.

The 'royal' graves, III, IV and V, contained twenty-two vases of gold, one of electrum, over thirty of silver, a dozen or more of bronze, over fifty large vessels of copper, at least ten of lead, nine vases and vessels of stone, up to a dozen of faience, and pieces of four ostrich-egg rhyta, often embellished. These vases must be distributed between at least ten people, not counting the central burial of V and the child or children in III: nevertheless, these totals are staggering,

12. SG, 162-3, no. 919 and 'Ohne Nummer'.

13. SG, 71, nos. 223-6.

14. Aegyptiaca, 55.

15. SG, 63, nos. 201-3, 69, nos. 210-13.

16. SG, Pls. 106:212, 168:213, 202; cf. M.R. Popham, "Late Minoan Pottery: a Summary", in BBA 62 (1967), 341.

hardly to be paralleled in the Aegean, except that large groups of bronze or copper vessels continue to be found. It will be easiest to consider these vases in groups of the same material. (See FIG. 29 for some examples of gold and silver vase-shapes).

The gold vases varied from small and flimsy types to remarkably solid ones. The Lion's Head Rhyton weighed over 600 grammes, but was surpassed by a stemmed cup and the inlaid electrum cup from Grave IV, which both weighed over a kilogramme.¹⁷ The majority varied between 50 and 250 grammes, the plain vases being generally heavier.¹⁸ Most were varieties of the Vapheio cup: two from Grave V repeated the arcade decoration of the examples of Graves VI and II, and a pair from Grave IV had sharp horizontal ribbing,¹⁹ but otherwise each example was an individual piece. One plain example from Grave V had the true 'Vapheio' handle,²⁰ all others the flat ribbon handle, often raised above the rim; a central rib was found on many examples. Other shapes represented were the stemmed cup, by five examples, including the cup of electrum, all of them different, the kantharos, the jug, and a variety of lidded vases, three shaped like amphorae and two like cylindrical pyxides; there was also the Lion's Head Rhyton. Decoration on these vases included linked spirals, stiff foliate sprays, a row of

17. All these weights are given on SG, 167.

18. Ibid.

19. SG, Pls. 123:627, 124:623, and 104:392-3 respectively.

20. SG, Pl. 123:630.

rosettes, and friezes of running lions and swimming dolphins: the electrum cup was decorated with gold cutouts and gold discs upon inlaid niello bands.²¹

The great majority of these vases have no parallel in metal. One exception is the kantharos, a typical MH vase-shape, which has perfectly good parallels in gold from a hoard discovered in eastern Messenia, and another in the Metropolitan Museum of New York, which may not be genuine.²²

Two spiral-decorated gold Vapheio cups have been found at Peristeria in Messenia, one close to a cup from Grave V.²³ Two gold stemmed cups, from the Benaki Museum (supposedly from a grave near Thebes) and from Brussels, have decoration of animals chasing one another, but the style of their decoration is so odd that I doubt if they are genuine.²⁴ Parallels in other materials are more common.

The small spiral-decorated jug may be compared to a faience one from the Temple Repositories,²⁵ and the spray-decorated Vapheio cup with a clay one from a Lerna grave.²⁶ Stone lion's head rhyta provide a parallel

21. SG, 94-5, Pl. 112:390, cf. Strong, op.cit. (supra, note 1), 43.

22. SG, Pl. 108:440; cf. R. Hope Simpson, "Identifying a Mycenaean State", in BSA 52 (1957), 239, and infra, Ch. IV; Strong, op.cit. (supra, note 1), 33, with Pl. 2B.

23. Praktika 1965, Pls. 138-9, cf. SG, Pl. 125:629.

24. AA 54 (1939), 225, 231-2, fig. 4; H.T. Bossert, The Art of Ancient Crete (1937), 43, fig. 69.

25. SG, Pl. 103:74, and PM I, 498, fig. 356.

26. SG, Pl. 110:313, and Deltion 22 (1967) C, Pl. 131:ζ'.

in type but not technique for the Lion's Head Rhyton,²⁷ and stone chalices, two of which are found in the Shaft Graves, are clearly related to 'Nestor's Cup'.²⁸ The stemmed cups are related by the shape of their bowls to Cretan cup-types: the addition of a hollow stem is presumably the result of mainland influence, since the MM IA stemmed bowl is constructed on a quite different principle, being hollow all the way down inside to a flat base.²⁹ The origins of these vases are thus diverse, including Cretan types of metal, stone, faience and clay, a type combining Cretan and mainland influences, and one purely mainland shape, the kantharos.

The silver vases were rarely in a good state of preservation, and it is consequently more difficult to discuss them. It is clear from the fragments that Vapheio and rounded cups, large and small jugs were well represented.³⁰ Stemmed vases included a goblet decorated with gold-plated rosettes, two vast bowls, and a small goblet.³¹ This group also included several masterpieces, the Bull's Head Rhyton, a tall silver ewer with repoussé spirals and fluting from Grave V, the Siege Rhyton and the Battle Krater: of these the first was embellished with

27. PM II, 828, fig. 542, 830, fig. 544, 833, fig. 549.

28. SG, Pl. 109:412, cf. Pl. 138:600, 854.

29. MP, 56-8.

30. SG, Pls. 123: top row, 127, 132-4, and pp. 150-51, figs. 64-6, 153, figs. 71-2.

31. SG, Pls. 127:520, 135; ArchEph 1957, Chronika, 6, fig. 3.

gold, the third and fourth largely coated with niello.³² The Stag Rhyton, apparently made of an alloy of silver and lead and weighing over two and a half kilogrammes, is surprisingly coarse in technique compared with these, and may be an Anatolian import.³³ The workmanship of the Bull's Head Rhyton, the use of niello, and the complex figured decoration of the Siege Rhyton and Battle Krater cannot be paralleled in Cretan metalwork at present, but Cretan stone vases supply some parallels in shape and also have intricate compositions.³⁴ The large silver ewer may be paralleled in bronze from Knossos,³⁵ a small silver jug in clay,³⁶ and the rounded cups by silver cups.³⁷ The origins of this group are thus as diverse as those of the gold vases.

The bronze and copper vases belong to a much more uniform and well-represented industry.³⁸ A few small bronze vases, including side-spouted cups and jugs plated with gold and silver, were found,³⁹

32. For details, see below, (v) Techniques and Materials.

33. SG, 94, Pls. 115-6:388, p. 167 for weight; F. von Bissing, "Zur Geschichte des antiken Rhyta", in AA 38-9 (1923-4), 106-7.

34. Zervos, op.cit. (supra, note 6), 333, fig. 436, 370, fig. 524; ibid., 330-31, figs. 480-83, 364, fig. 534, 370, fig. 544, 376-7, figs. 552-5, and Praktika 1963, Pl. 1528, are the best known decorated Cretan stone vases.

35. PM II, 646, fig. 411.

36. Supra, note 6.

37. PM II, 387, fig. 221.

38. H.W. Catling, Cypriot Bronzework in the Hellenic World (1964), 166-88, discusses this class thoroughly.

39. SG, Pl.164 (cups), pp.105, no.468, 106, no.475, 151-2, no.831 (jugs).

but the majority were large copper vessels of domestic types, that showed many traces of use and had sometimes been repaired.⁴⁰ The most common types were the cauldron, krater and hydria (See FIG. 29): of these the first and last have good Cretan parallels, but the krater has so far only been found in the Shaft Graves and the Vagenas tholos at Pylos (unpublished). However, it was constructed in the same way as the other vases, of plates rivetted together, and may reasonably be considered to derive from Crete. A unique carinated cauldron has recently been proved to be Cretan by the discovery of a Linear A sign on one of the handle-bases.⁴¹ Some pans and lamps related to Cretan types were also found.⁴² There is also evidence of large lead vessels, both plain and decorated:⁴³ no parallels have been found of this early date.

Vases of faience in these graves have rarely survived intact. The majority came from Grave III: shapes represented included an oval rhyton, a rhyton in the shape of a triton-shell, a double-mouthed jug, a knob-decorated jar, other jugs, some spouted, and miniature goblets.⁴⁴

40. Mycenae and Tiryns, 276-7; SG, Pls. 155: right, 158; Catling, op.cit. (supra, note 38), 176, nos. 9, 15-6.

41. SG, Pl. 161; E. Grumach, "Linear A auf dem Festland", in Kadmos 1 (1962), 85-6, fig. 4.

42. SG, Pl. 163; Catling, op.cit. (supra, note 38), 174 (Type 9), 183-4 (Types 27a, 28a).

43. SG, 109, nos. 492-501 (Pl. 102), 160, figs. 73-9.

44. SG, 60-61, fig. 16; 64-5, Pls. 148-9.

Several of these can be paralleled in stone or clay from elsewhere.⁴⁵ Grave IV held only a bowl, a platter and the neck of an ostrich-egg rhyton in faience;⁴⁶ dolphins attached to an ostrich-egg rhyton in Grave V were also of faience.⁴⁷ Other objects of faience from Grave IV, gaming-board inlays and 'sacred knots' have even the same makers' marks as Knossian pieces.⁴⁸ This strongly suggests that they are Knossian imports, and the same may well be true of many of the vases: the ostrich-egg rhyta may well have been decorated in Crete. The group in III may be a set of ritual vessels. However, the decoration of one jug from Grave III with helmeted warriors⁴⁹ might suggest that it is a local product, belonging to the class of war-scenes typical of the Shaft Graves.

Stone vases are rare, and even more probably imports from Crete. Grave III held a bowl and two cupped hands in alabaster;⁵⁰ Grave IV, a chalice and three-handled stemmed vase of limestone and a jug of alabaster;⁵¹ Grave V, a chalice of limestone and an alabaster jar,

45. Zervos, *op.cit.* (*supra*, note 6), 369-70, figs. 542-4 (oval rhyton); *PM II*, 821, fig. 537:H (triton-shell); *Phylakopi I*, Pl. 27:8-9 (double-mouthed jug).

46. *SG*, Pls. 142:567, 573, 148:566.

47. *SG*, Pl. 141:828.

48. *SG*, 114-5, nos. 553-64, 569-71, fig. 42, Pls. 51-2; cf. *PM I*, 432-5.

49. *SG*, 61, fig. 16.

50. *SG*, Pls. 139:164, 166:165.

51. *SG*, Pls. 138:339, 600, 140:592.

converted from an Egyptian alabastron, with a gold-plated bronze rim, gold-plated wood handles, and a lost spout;⁵² fragments of a spouted alabaster vase with bronze-strengthened foot may belong to Grave IV or V.⁵³ Most of these can be related by shapes or, in the case of the converted alabastron, by technique, to the Cretan stone vase industry.⁵⁴

Very little can be said about the plated and inlaid boxes. The best evidence comes from Grave V, which contained one that was apparently hexagonal, decorated with alternated pairs of gold plates of three types;⁵⁵ a rectangular one of wood, decorated on each side with two animals in high relief, with inlaid ivory stands below them and corner-pieces,⁵⁶ possible remains of another ivory-inlaid box,⁵⁷ and a long oval dish of plain wood.⁵⁸ Gold plates and cutouts from Grave III probably also adorned boxes.⁵⁹ The decoration of all these suggests that they were locally made.

The rarity of duplicates in this material and its random distribution strongly suggest that these vases were part of personal

52. SG, Pls. 137:829, 138:854.

53. SG, 56, fig. 74.

54. Warren, op.cit. (supra, note 10), 39-40 (Nos. G4-5), 41 (no. L2), 44 (nos. Q1-2).

55. SG, 143-4, Pl. 144:808-11.

56. SG, 144-5, Pl. 145.

57. SG, 145.

58. SG, Pl. 147.

59. SG, Pls. 32:109, 33.

collections, which might include heirlooms, gifts, commissioned pieces, and ceremonial and domestic vessels. The appearance of a mainland shape like the kantharos, the patching of copper vessels and the decoration with scenes that clearly appealed to the rulers of Mycenae are clear enough signs that there was a local metal vase industry; it seems equally clear that the stone vases were imported, as were probably the faience vases and certainly the ostrich-egg rhyta. The variety of decoration and shape among the gold and silver vases argues that no stereotypes were produced, which suggests either that craftsmen had a free hand or that their masters were interested in novelty. The Cretan influence is very strong, as one might expect, for the craftsmen were surely Cretans, but local demand turned their talents in new directions. In the metal vase industry, we have some good evidence that the rulers of Mycenae were not content simply to accept Cretan types, but occasionally imposed their own wishes, which resulted not only in the birth of new forms such as the stemmed cup, but in some extremely fine work.

(5) Techniques and Materials(i) Techniques

A discussion of the techniques of the Shaft Grave material must centre on the metalwork. I have suggested above that the stone vases, objects of faience and inlaid boxes and gaming-boards were direct imports from Crete, and it is difficult to find any important pieces that are likely to have been locally made. The only possibilities are a faience jug decorated with warriors in relief and a sealstone showing a duel, from Grave III,¹ and a wooden box with animal-decoration in high relief and an ivory mirror-handle showing the front of a lion, from Grave V,² which have subjects that belong to well-known Shaft Grave classes. The amber necklaces may have been imported directly from Europe, and other beads of stone, faience and glass from the Aegean or Near East. The stone arrowheads and boar's tusk plates are certainly the products of local industries, established in MH times. But it is the weapons, metal vases and jewellery, between them representing the great majority of Shaft Grave finds, that provide the best evidence for new techniques.

It seems probable, as we saw in the summary of Chapter II, that MH metallurgy was of a very low standard compared with that of Crete or the Cyclades in the same period. We cannot even necessarily assume that smiths at Lerna would have had the same skills as smiths at Sesklo.

1. SG, 59, fig. 14 (sealstone), and 61, fig. 16 (jug).

2. SG, 141, figs. 53-9 (mirror-handle), and 144-5, Pl. 145:512-3 (box).

Generally, the evidence from MH Greece suggests that weapons and tools were usually small and simple types that could be produced in a one-piece mould; the moulds from Sesklo and possibly two daggers with midribs from Lerna, that could be imports, show that more complex types could be produced in two-piece moulds. The jewellery found suggests that MH jewellers knew how to produce metal wire, sheet metal and even gold leaf; a few bronze pins with ornate heads have been found, and at Sesklo some copper tubes decorated with repoussé dots. Of the types, the pins, metal circlets, tweezers, awls, and chisels may have been inherited from the Early Bronze Age; the pins and circlets are not common elsewhere in the Aegean. The 'shoe-slot' spear and various knives seem to be indigenous, although the knives have some earlier parallels in Crete.³ Only the daggers seem to be imitating contemporary MI types. No attempt was made to decorate weapons, except for the silver caps of rivets on some daggers and possibly the knob behind the point of the Type 6b knives.

This dull and limited range, with hardly any attempt to reproduce or emulate contemporary Cretan or Cycladic types, cannot be the result solely of a shortage of raw materials, but must be partly the result of a low level of skill and a lack of imagination. I think, therefore, that any assumption that even part of the finds in the Shaft Graves were the products of mainland craftsmen, after only a short exposure to foreign influences, would be very rash. The pottery of the MH Late

3. H.K. Sandars, "The Antiquity of the One-Edged Bronze Knife in the Aegean", in ProcPS 20 (1955), 176.

Phase shows a considerable reaction to Aegean influences, culminating in the Mycenaean style, but no such development may be traced in the metallurgy or other crafts, and I think that this is significant.

It is easier to believe that foreign craftsmen were working at Mycenae. The strong Cretan element in the finds suggests that they included Cretans, especially at the acme of the Shaft Grave period, but at its beginning they may have come from the islands. It cannot be proved that the islands' smiths were under strong Cretan influence at this period; but earlier in the Bronze Age their metallurgy had been as advanced as that of Crete, and it is likely, for example, that having developed so far along the road to a sword of rapier type they would have been able to reproduce the Cretan Type A sword.⁴ The islands were more closely in contact with the mainland than Crete was in the MH period, and their society may have allowed the free movement of craftsmen more easily than the 'palace society' of Crete.

The weapons show the difference in levels of skill most clearly. The Cretan Type A sword, long spear and dagger were introduced, the first two certainly produced by the use of two-piece moulds. The device of flanging, already known in Crete, was introduced for the hafts of the Type B sword and one or two knives:⁵ the Type B sword seems to be partly derived from a type of dagger already current in Crete, which

4. C. Renfrew, "Cycladic Metallurgy and the Aegean Early Bronze Age", in AJA 71 (1967), 1-20; K.A. Branigan, "A Transitional Phase in Minoan Metallurgy", in BSA 63 (1968), 198-9.

5. SG, 140, fig. 57, Pl. 102:458, and unpublished examples from Grave Circle B, on show in the National Museum at Athens.

had flanged shoulders but not a flanged hilt.⁶ The Cretan smiths do not seem to have known how to cast a socketed weapon, for both spearhead and 'Slachtmesser' were cast with a long flat tail of metal, which was beaten into a tubular shape: sometimes a wooden core was retained within this on the 'Slachtmesser'.⁷ The spearhead might have a ring fixed around its socket, but was always nailed to the shaft; the best examples of the 'Slachtmesser' had a ring at the end of the handle, apparently part of the casting.⁸

It is in the decoration of sword- and dagger-blades that the smiths of Mycenae showed their skill in the preparation of moulds. Some blades have grooves or spirals along the midrib and blade that may have been traced, but others have ribbed or otherwise decorated midribs and motifs along the length of the blade that are in relief and must therefore have been produced in the casting, although finer details such as the hair of horses' manes must have been added by tracing in the final work on the blade.⁹ An immense amount of labour and concentration must have been needed to produce such blades, and it is hardly surprising that they are rare, and confined to the Shaft Graves.

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6. N.K. Sandars, "The First Aegean Swords and their Ancestry", in AJA 65 (1961), 22-4; Branigan, op.cit. (supra, note 4), 192-5.
 7. SG, 206-7 (spear), 209 (Slachtmesser); cf. 104, no. 450, for wooden shaft.
 8. This is by no means clear; cf. SG, 103-4, no. 443, and 209.
 9. Praktika 1952, 457, fig. 26, G.E. Mylonas, Mycenae and the Mycenaean Age (1966), fig. 95, SG, 98, fig. 31, 101, fig. 34, Pls. 80:752, 82:727, 736, 85-6, 87:435, 89, 92:747, 751, 93:428, are nearly all the examples known.

The less difficult grooving and ribbing of blades continued to the end of the Middle Mycenaean period at least; occasionally later blades have simple grooving. Decorated sword- and dagger-blades are to be found fairly frequently in Crete and the Cyclades from much earlier times:¹⁰ the best examples are from Crete, and I think it is fair to assume that the craftsmen who produced these blades were Cretans.

Decoration of the sword and dagger was not confined to ornamenting the actual blade. Some swords had gold plates fixed across the heel, or gold leaf on the decoration,¹¹ and a great many swords and daggers have rivets capped with gold or silver. They might also have fine gold plating on the hilt,¹² or ivory hilt-plates inlaid with gold nails in geometric patterns,¹³ and one remarkable dagger had a handle of gold, shaped like linked quatrefoils that were inlaid with lapis lazuli, and having two animal heads, probably griffins', reaching down from it and appearing to grip the blade, with a pommel of silver and rock crystal.¹⁴ The fine hilt-plates and pommels of weapons from Mallia, though not closely parallel to any of these types, provide ancestors for the genre; the fine Type C and D swords of Knossos, Dendra and

10. Branigan, op.cit. (supra, note 4), 186, 193, fig. 3:23, 30, 197, fig. 4:24, 198-9.

11. SG, Pl. 82:726 (attached plate); 99, nos. 402, 404, and Mylonas, op.cit. (supra, note 9) (leaf-covered).

12. SG, 98, figs. 30-32, Pls. 84:634, 690, 723, 91:764. (See FIG. 20)

13. E.g. SG, 97, nos. 396-7, Pl. 87:435. (See FIG. 20)

14. SG, 82, no. 294, and Pl. 87. (See FIG. 20)

Mycenae continue the tradition in the Middle Mycenaean period.¹⁵

The most ornate of all the weapons, however, are the inlaid daggers. Several daggers with plates of another metal inlaid into the blade have been found in the Shaft Graves:¹⁶ one from Grave Alpha had a probably silver plate decorated with spirals, one from Grave V a gold plate, on which spirals have been traced, the lines being then filled with niello, a dark blue-black metallic compound. But on five daggers, from Graves IV and V, the original plate of darker bronze was decorated with already prepared cutouts, in various alloys of gold, silver and bronze, which were fitted into prepared matrices in the bronze plate, their finer details were then traced and filled with niello in powder form, which became plastic when gently heated.¹⁷ The scene presented might be a simple row of motifs, or a complex scene of men or animals hunting. This technique is known as Metallmalerei.

This technique was also used on one metal vase in the Shaft Graves, and both metal vases and daggers in similar technique have appeared on the mainland in contexts of later date, suggesting strongly that the technique continued. No certain examples have been found in Crete,

15. F. Chapouthier and J. Charbonneaux, Fouilles Exécutées à Mallia: Premier Rapport (1922-4) (1928), Pls. 1, 31:3; F. Chapouthier, Deux Épées d'Apparat Découvertes en 1936 au Palais de Mallia (1938), 29, fig. 11.

16. Mylonas, op.cit. (supra, note 9), 101 (Grave Alpha); SG, 135, no. 744 (Grave V), cf. also 746.

17. SG, Pls. 92:764, 93-4; cf. E.T. Vermeule, Greece in the Bronze Age (1964), 98-9, and R.A. Higgins, Minoan and Mycenaean Art (1967), 140, for description of the techniques.

however, although a Vapheio cup-handle has been reported, and the only weapon known outside the mainland is a fragment of a sword-blade supposed to come from Thera,¹⁸ which seems to have been a Cretan colony. It has been argued that knowledge of the technique was acquired independently by the mainlanders from Syria, where weapons inlaid with gold and niello have been found in tombs at Byblos contemporary with the last part of the Egyptian Twelfth Dynasty.¹⁹ Other inlaid weapons, from Egypt, belong to the end of the Second Intermediate Period and the start of the Eighteenth Dynasty, and it has been argued that Aegean influence can be discerned on them.²⁰ However, it is extremely unlikely that mainland contacts should have extended as far as Egypt and Syria on such a scale as to involve the adoption of new techniques, whereas Cretan contacts with Byblos and Egypt extend well back into the Middle Bronze Age. Moreover, Cretan craftsmen are far more likely to have been capable of learning this technique. Although the scenes presented are not always typically Aegean, there is nothing un-Cretan about the style of these daggers: the subjects, however, are closely linked to those of other objects in the Shaft Graves. The earliest pieces may well be those with a simple row of motifs; the "Lion Hunt" and "Leopards and Ducks" daggers represent a culmination of

18. Higgins, op.cit. (supra, note 17), 150, and Vermeule, op.cit. (supra, note 17), Pl. 13:C.

19. P. Montet, Byblos et L'Égypte (1928), 173-4, 180.

20. H.J. Kantor, The Aegean and the Orient in the Second Millennium B.C. (1947), 63-6 (dagger of Ahmose and Axe of Aakotep), Pl. IV, 842-3 (weapon of Kamose).

the technique that was probably reached by Cretan craftsmen at Mycenae, and could not be matched later in its handling of scenes of crowded action

The metal vases were all made in much the same way, but were variously decorated.²¹ The smaller ones were raised out of single pieces of metal sheet, having only the handles and feet attached, while the larger vessels were made of separately shaped pieces rivetted together: where a mouth-piece was joined to the body, the rivetting might be covered by an ornamental moulding, as on the large silver jug from Grave V.²² On the Battle Krater, the neck and body are said to have been joined by some form of soldering,²³ but this is exceptional. Bronze plates were often used to strengthen the feet or other parts, and gold-plated bronze or copper rims and other attachments might be joined to silver vases: thus, the Bull's Head Rhyton had ears and probably a rosette on the forehead in this technique, and was also edged with gold on the nostrils and lips.²⁴

The gold and silver vases, mostly small, were often decorated. The decoration might be produced by working from the inside (repoussé), in which case the vase would be laid on a bed of some soft, semi-resistant material such as pitch, or from the outside (chasing), in which

21. D.E. Strong, Greek and Roman Gold and Silver Plate (1966), 33-44.

22. SG, 148, no. 944.

23. A. Sakellariou, "Un Cratère d'Argent avec Scène de Bataille Provenant de la IVème Tombe de Mycènes", in First Mycenaological Congress I, 265.

24. SG, 93, no. 384.

case it might be filled with the same material; a combination of both was probably used on the best. Repeated motifs such as the rosettes and lions²⁵ on two goblets might have been produced by stamps or by beating into a negative die. An added refinement, only noted on the silver jug from Grave V and the Battle Krater from Grave IV, was the use of niello to give a two-colour effect. On the Battle Krater it was used to cover the entire surface of the vase except the figures of the fighting men, and may have been used on them for details; on the silver jug it covered the lower body, and was used to fill the notches of the shoulder-moulding and handle-edges.²⁶ We may finally note a single electrum goblet which was decorated in the inlaying technique: bands of niello were set in shallow grooves around the rim and body, to which gold discs were fixed, while between these at three places on the body gold cutouts were hammered into prepared matrices.²⁷ The large copper vessels were undecorated, except for one cauldron which had traced ornament on the handle:²⁸ occasionally, the bronze vases were decorated, or plated with gold or silver.²⁹

The techniques employed on the large copper vases may be closely

25. SG, Pls. 111:351, 126:656.

26. Sakellariou, op.cit. (supra, note 23), 264; "Νέα μορφή παλαιών αντικειμένων τῶ Εθνικοῦ Μουσείου", in ArchEph 1957, Chronika, 7-8.

27. SG, 94, no. 390.

28. SG, 119, no. 604a (visible on Pl. 161, side-view).

29. SG, 105, no. 468, and 106, no. 475 (gold-plated), 151-2, no. 831 (silver-plated), Pl. 156:827 (decorated).

scabbard-covers, etc., were decorated by repoussé work or tracing, and the repeated ornament on many must have been produced by stamps. The masks, however, seem to have been hammered out over hard forms on which the features had been engraved, and were finished by tracing the finer details.³¹ The gold plating of the buttons was worked over already incised bone bases,³² and the sets of round gold plates were probably produced by stamps.³³ The gold rings and flattened cylinders were made up of lead cores, over which impressed gold plate was worked: the same technique was used for a gold lion pendant.³⁴ The cutouts were cut from gold leaf, presumably on shaped forms, and sometimes had impressed or traced details.³⁵ These might be joined back to back to form beads or pinheads:³⁶ in one case, they are described as having been welded together, in others they may have been soldered or folded together.³⁷ Beads pendent from ribbed tubes were made up in this way, rather than being cast. A fine pinhead ~~was~~ worked up in repoussé style from gold plate.³⁸

There are also groups of beads and other objects made of gold plate

31. C.W. Blegen, "Early Greek Portraits", in AJA 66 (1962), 245.
(See FIG. 23 for examples)

32. SG, 85.

33. E.g. SG, 43, no. 2.

34. SG, 49, no. 33, 74, no. 241, 79, no. 275 (pendant).

35. E.g. SG, 48, no. 26; for traced details, cf. SG, 51, nos. 45, 50.

36. SG, 189-90, note 1.

37. SG, 51, no. 52 ('festgeschweisst'); R.A. Higgins, Greek and Roman Jewellery (1961), 75.

38. SG, Pl. 30:75.

paralleled from Crete, where identical cauldrons and ewers have been found; one of unique type must certainly be an import, since it has a Linear A sign on the base of a handle, and some or all of the others may be. One or two of the shapes cannot be paralleled in Crete, notably the deep krater, but they are in exactly the same technique and are probably types that simply have not been found in Crete so far. It is otherwise with the small gold and silver vases, for which there are hardly any earlier or contemporary parallels in Crete: but the few examples found include some with fine repoussé work, and a large bronze ewer from Knossos may be compared to the large silver jug from Grave V.³⁰ However, there is a strong 'local' element in the fine metal vases, identifiable in shapes like the kantharos and goblet, which seem to be of mainland origin, and the appearance in metal of types found in Crete in stone, such as the various rhyta. It might therefore seem probable that the development of the decoration of such vases took place at Mycenae, culminating in the decoration of the Siege Rhyton and Battle Krater. Both of these are masterpieces for which there is no later parallel in metal, but fine metal vases, often of probable Cretan workmanship, have appeared in Early and Middle Mycenaean contexts and occasionally even later, including a small number of vases decorated in Metallmalerei technique.

The jewellery and other gold ornaments were decorated in various ways. The large gold ornaments, crowns, head-bands, baldric-plates,

30. PM II, 646, fig. 411.

or gold wire. One class, which makes much use of wire-spirals, includes beads, earrings, and armlets;³⁹ the beads have Near Eastern connections,⁴⁰ but the rest may be local, particularly since there are parallels of a sort from a late MH grave at Thebes. One necklace of gold palm-branches from Grave Omicron has good parallels in the Aegina Treasure.⁴¹ A pair of earrings, a pinhead and some globular beads in Grave III have coarse granulation.⁴² Some long gold pins are rare examples of modelling in the round:⁴³ other pins have ornate heads of rock crystal or gold.⁴⁴ A final ornament worth noting is a tassel of gold foil.⁴⁵

It cannot really be said that much of this material has close Cretan parallels. The cutouts and gold discs, probably clothing-ornaments, and head-bands, may be compared with objects from the Aegina Treasure and a MH III - LM I tomb at Poros, near Herakleion;⁴⁶

39. SG, Pls. 20:53-5, 21:56-9, 63-7, 133; III, Feb. 27th 1954, 324, fig. 5.

40. Cf. M.E.L. Mallowan, "Excavations at Irak and Chagar Bazar", in Iraq 9 (1947), 171-6.

41. AthAA 2 (1969), 212, fig. 3; cf. DA 52 (1957), Pls. 12:a-b.

42. SG, Pls. 20:69, 112, 32:61.

43. SG, 75, nos. 245-7, and Pl. 13.

44. G.E. Mylonas, Ancient Mycenae (1957), fig. 57; SG, Pl. 31:102-5 (rock crystal); SG, Pls. 17:89, 31:76, Archaeology 8 (1955), 46, fig. 9 (gold).

45. SG, Pl. 56:639.

46. R. Higgins, "The Aegina Treasure Reconsidered", in DA 52 (1957) 42-57; A. Lenbesi, in Architika 1967, 205-6.

the workmanship of the fine 'goddess' pinhead may be compared with that of a 'master of animals' pendant in the Aegina Treasure,⁴⁷ and one necklace has a very close parallel there. But the Shaft Grave jewellery is in general rather crude compared with that of the Aegina Treasure and the rare LH remains from Crete, notably in the absence of filigree work and the rarity and coarseness of granulation.⁴⁸ Several of its classes, long pins, wire-ornaments, and head-bands, may be traced in the earlier traditions of the Aegean and of the mainland; others, such as the cutouts, round gold plates and buttons, form classes confined to the three 'royal' graves, which have no ancestry but may be linked in style or subject-matter with other Shaft Grave material. Similar jewellery appears only sporadically in later graves, and seems to have quite disappeared by the time of the burials in the Dendra tholos, its place being taken by more uniform classes of relief-bead and cutouts being represented only by rosettes. This is the class of Shaft Grave objects in which Cretan influence is least apparent, connections with earlier LH practice are most noticeable, and 'local' experiment is most evident: whoever the jewellers were, they do not seem to have been from the same schools as the 'palace craftsmen' from Crete.

Only one other class of objects connected with the Shaft Graves requires comment on their technique, the grave-stelae. Two techniques

47. *BSA* 52 (1957), Pl. 9:a-b.

48. *Higgins, op.cit. (supra, note 37), 69, cf. 83 for cutouts.*

were used, incision and relief: the relief is flat except in one case, where there seems to have been an attempt at moulding. In my discussion in Section 3, I have suggested that sealstone-cutters or metal-workers might have been able to design the stelae: it remains doubtful whether they would have been able to work them. A maker of stone vases might have been most suitable, but we have already seen that it is very likely that the stone vases of the Shaft Graves were imported. Possibly a stonemason trained in Crete might have been able to dress the stone and cut around a design incised by someone else. The total absence of comparable material makes the drawing of any conclusion difficult.

In all these classes, the necessary skill to produce the objects and often parallels for the techniques used are to be found in Crete. Techniques that are without parallel in Crete, such as the production of stelae and masks, and the inlaying 'Metallmalerei' technique, are most likely to have been developed by Cretan artists or to be in fact Cretan, if only for the reason that MH craftsmen would not have been capable of developing them. The only other possibility is that the craftsmen came from the Cyclades or from Cretan colonies, where there may have been a comparable level of skill. It is difficult to be certain just how advanced the technology of these places was, but it was certainly superior to that of the mainland. However, the stylistic connections with Crete at the time of the Shaft Graves and later do suggest that Cretan craftsmen were working at Mycenae; this survey suggests that they were not merely reproducing but inventing and experimenting, under the stimulus of new patronage with different requirements.

(ii) Materials

In the Early Bronze Age, considerable quantities of copper and a fair amount of silver seem to have been available in the Cyclades, and gold was known; in EM III, much gold was used for jewellery at Mochlos in eastern Crete. Metal finds from the mainland in these periods are rare, but suggest close contact with the Cyclades. I have noted the evidence for an important metal-working centre at Sesklo, which quite possibly had access to a local source of copper, the evidence for another at Lerna, and the possibility that Aegean activity along the coasts of the mainland was connected with the trade in metal, particularly copper. The MH smiths seem to have been somewhat sparing in their use of copper, to judge from the size of the objects produced, but there seems to have been enough available to them. Gold and silver were also circulating in small quantities; the silver might come from the Cyclades or, at the end of the period, Thorikos in Attica, while the gold might also be imported or come from small places. Tin must certainly have been imported, and it is significant that several of the analysed objects from MH Greece have proved to have low percentages of tin, some hardly any at all.¹ Another imported material was obsidian, used for arrowheads, although just as many were made of local flint or chert as of obsidian. Beads of carnelian, rock crystal and faience were surely imported as finished objects; ivory is used once, for a dagger-hilt at Prosynna.

The contrast with the Shaft Graves is remarkable. Enormous

1. Supra, p. 160.

quantities of gold, silver and copper were used, the analyses of a bronze sword-fragment and vase-handle from Grave IV² showed that they contained respectively 13.5 and 10.1 tin, and a good deal of ivory seems to have been imported as a raw material to be made into hilt-plates and pommels. Amethyst beads and alabaster pommels are found, also great numbers of amber beads and a little lapis lazuli. The amber beads, like most of the faience, stone and glass objects and the ostrich-egg rhytons, were probably imported as finished objects. There can be no doubt that these materials were not to be found in the neighbourhood of Mycenae in such quantities, if at all. Where, then, were they acquired?

I do not think we must necessarily conceive of the rulers of Mycenae as sending expeditions in search of these materials. Most were available in Crete in the MM period, and were surely obtained by the processes of trade, possibly to some extent by a system of exchange of presents like that which flourished in the fourteenth century B.C., to judge from the Amarna letters.³ It seems likely that the rulers of Mycenae could have obtained most of their raw materials via the Cyclades or Crete; they may also have had access to the sources of gold and copper in central Europe. I think that the problem is not so much

2. Mycenae and Tiryns, 375-6.

3. S.A.B. Mercer, The Tell El-Amarna Tablets (1939), 11-205, for the correspondence between the major kings of the period; cf. also 215, 222, for letters concerning the exchange of personnel (usually slaves?) and gifts, from minor princes. See especially letters 13 (pp. 39-43), 14 (pp. 43-57), 22 (pp. 79-93), 25 (pp. 129-49) for enormous lists of presents from and to the Egyptian kings.

where they got the raw materials as where they acquired the wealth to pay for them, and I shall discuss this problem in greater detail in the summary.

There remains something extraordinary about the quantities available, particularly the amount of gold used, which cannot be paralleled in the admittedly smaller accumulations in the Vapheio tholos, Dendra tholos and T. 10, and the LM II-III A graves in north Crete. But all the materials used in the Shaft Graves, with the exception of ostrich-egg, continue to occur commonly in Early and Middle Mycenaean contexts, and one ostrich-egg rhyton was found in the Dendra tholos. Thus the rulers of Mycenae did not have any special sources later closed; rather, they either could afford more or got it more cheaply.

- (6) Shaft Grave Art (Detailed references for the objects discussed will be found in previous sections).

The study of Shaft Grave Art has been bedevilled in various ways. It has been treated as a whole, without much attempt to distinguish the contents of different graves or to consider stylistic development; it has been expected to reveal the origin of the 'Shaft Grave things'; and the idea that national characteristics of the mainlanders and Cretans are displayed in their art has constantly appeared in discussion. In contrast, I would argue that the contents of the Shaft Graves are very much personal hoards, which will reflect primarily the tastes and wealth of their owners; that for this reason they cannot give any certain indication of their owners' origin; and that there cannot have been, at this stage, any such thing as mainland art.

The last point is the most important, for it has been frequently argued that some or many of the objects in the Shaft Graves were produced by mainland artists, either because they have no parallels in Crete or because they were thought to be alien to the spirit of Cretan art.¹ But the survey of the MH world has shown how impoverished and backward MH art and technology were, and it is scarcely credible that in a generation or two the artists and craftsmen of the mainland should have made such great strides; for it is pure

1. Cf. R.A. Higgins, Greek and Roman Jewellery (1961), 69 (much of jewellery), 83 (cutouts), Minoan and Mycenaean Art (1967), 78, cf. 153 (gold-plated box); C.W. Blegen, "Early Greek Portraits", in AJA 66 (1962), 246 (masks); F. Matz, Crete and Early Greece (1962), 79 (the bulk of the finds).

romanticism to believe that they had hidden 'Greek' talents waiting to be touched off by foreign influences. They had at their disposal materials such as bone that they could have decorated if they wished, but they produced virtually nothing. Only in the decoration of pottery is any trace of imagination shown. Whatever the origins of elements in the decoration of Shaft Grave objects, it does not seem possible that much can have been inherited from III.

It is, however, quite possible that certain styles of decoration were developed at Mycenae as a response to local demand, just as some techniques and types seem to have been. Such development would have been in the hands of foreign craftsmen, mainly Cretans, it seems. Given the extraordinary ability of Cretan artists in many spheres, this need not seem unlikely, for there is no reason to believe that they were incapable of turning their hands to something new, rather the reverse: the remains from MI and IM Crete surely show that Cretan artists were constantly experimenting. They would, of course, have to answer new demands in terms of what they could do: one could expect to see 'Cretan' traits in the execution, or to find Cretan parallels. But the absence of parallels cannot necessarily be taken as proof that something is not Cretan: the Linear A sign on the handle of a unique cauldron in Shaft Grave IV, sometimes thought to be of a European type, is a warning against such an approach.

A simple division may be made between the contents of the 'royal' Graves III, IV and V, and the rest. In the latter, there is a restricted range of decorated objects: pieces comparable with objects

from the 'royal' graves do occur, but are rare. The connections between the two sets of graves are such that they must in many cases be contemporary; the distinction is one of wealth and status, not date. Most of what is often called 'Shaft Grave art' is to be found in the 'royal' graves.

It is also important to note that ornament is rarely, if ever, exactly duplicated.² Just as most of the metal vases are individual pieces, so the head-bands are mostly different in details of size and decoration, and the gold-plated buttons have many different types of decoration, most of which are represented by less than a dozen examples and some by only one or two. This is due to some extent to the nature of the decoration: large sets of round plates could be produced by the use of a stamp, whereas the bone buttons had to be incised separately and gold covers worked over them. Matching sets of gold ornaments have been noted,³ but the head-bands were not generally mass-produced, although they could have been; presumably, as the most conspicuous ornaments, they were intended to be different. The amount of variety remains remarkable, compared with the uniformity and mass-production of later Mycenaean jewellery, and recalls the variety in earlier MH pottery, in sealstones, and even in MH pottery of the Late Phase, where a similar dislike of exactly repeating decoration may be seen.

2. Exceptions are the gold ornaments from Grave I (SG, Pl. 35:184-5, 187), and two sword-hilt covers from Graves IV and V (SG, Pls. 73-4: 407, 81 and 84:723). (See FIG. 27 for differing head-bands).

3. Supra, (3) note 34.

Some final points must be made about the classes of object to be considered. I have argued above that the stone vases, the ostrich-egg rhyta, most of the faience objects and some beads of glass are direct imports, on the grounds that they are too rare to be attributed to local industries and often have very close Cretan parallels. The metal-work, on the other hand, is most often without close parallel elsewhere and includes many distinctive traits which suggest local manufacture; so, too, do the stelae and some of the sealstones. It is important to note that, whereas the majority of the jewellery and of objects of plate such as sword-trappings and dress-ornaments are decorated, most weapons, many metal vases and some stelae are plain. Decoration on the latter is an extra embellishment of something already valued for its own sake; we might, then, expect its decoration to have a special character.

Jewellery and personal ornaments are the earliest grave-goods to appear in the Shaft Graves after pottery and weapons, and form several categories. The most widespread is that of the large dress-ornaments and head-bands or crowns, made generally of fairly thick gold plate; some long plates from baldrics or shield-straps are related. In almost all cases the decoration of these is symmetrical, based on repoussé circles that are largest in the centre and diminish towards the edges; they are flanked by smaller ornaments, often alternated in strict symmetry, and rows of repoussé dots run around the edges of the bands. In general, the decoration of these becomes more complex as the size increases: the circles may be filled with rosettes or

whirling figures and flanked by leafy sprays or small groups of spirals. The finest of all has a border of double spirals and hatched ornament, in the 'complex geometric' style of another class (see FIG. 21). A single exception to the rule is decorated with alternating geometric figures in repoussé dots and has three pendants.⁴ The larger bands are simply stamped with circles filled alternately with rosettes and whirling figures.

A large class is decorated with a 'complex geometric' ornament, but is practically confined to the 'royal' graves. It includes round gold plates, bone buttons and mounts over which gold covers were worked, gold covers and plates for the pommels, hilts and sheaths of swords and daggers and occasionally for other objects, combs, wooden staffs, a bone spoon. (See FIGS. 22-3 for examples). This makes use of running spiral, meander and scroll patterns, repeated double spirals or spiral-headed quirls, crosses, stars, whirling figures and rosettes. On the plates and buttons these would revolve around the centre, on the lozenge-shaped bone mounts a central motif or two symmetrical opposed motifs would be surrounded by a decorated border; on the hilt-plates they would run in registers. A very few naturalistic ornaments, octopuses, butterflies and palm-leaves, were displayed in stiffly symmetrical style on the round plates. Large groups of round plates were produced by the use of a stamp, as I have said, but the gold-covered bone objects were incised and their covers then worked over

4. SG, Pl. 39:236-9.

then, while the weapon-fittings were decorated in a combination of repoussé and traced technique. A characteristic feature of this style is that motifs were outlined rather than produced by a single line, giving an impression of depth: outlined dots were often used as filling ornament between the curves of the running motifs, and the background was often hatched.

A simpler variant of this style uses interlinked rows of spirals to cover the whole available surface. This was used on the upper registers of stelae, on some gold box-plates, and on sword-hilts, on a sword from Grave Delta repoussé in gold, on others picked out in gold nails on ivory (see FIG. 20, where the interlinked motifs are swastikas). Single rows of running spirals or filled circles were also used on stelae, somewhat similar in style to the ornament of pottery.

The cutouts form a completely different class of ornament (see FIGS. 24-5). They were apparently cut on a form and had traced details. They nearly always represented natural objects, whether human beings or goddesses, animals, plants, or inanimate things such as wheels, crosses and shrines. The animal element was the largest, including many examples of addorsed or opposed pairs and others, such as octopuses or butterflies, symmetrically displayed. In fact, only a very few crude examples are asymmetrical, probably the earliest.⁵ These cutouts might be joined back-to-back to form beads or pendants.

5. EG, Pl. 27:29-31.

One very fine example in repoussé technique shows a goddess between palm-branches (see FIG. 27), resembling a pendant from the Aegina Treasure.⁶ The cutout technique was also used in a much more sophisticated way for scenes of lions and leopards attacking their prey, which adorned the sides of a box. Most cutouts were found in the 'royal' graves.

A few small classes may be recognised among the rest of the jewellery and ornaments; the wire-spiral class of jewellery (see FIG. 26), the burial-masks, a pair of earrings and a pinhead decorated with granulated quatrefoils and a few round beads decorated with separate grains, some lion-pendants. Other beads and ornaments are individual types. Nevertheless, the classes enumerated above do form the greater part of the jewellery and ornaments.

In contrast, the decorated metal vases can hardly be divided into classes at all. The small cups may be decorated with geometric motifs such as arcade-motifs, running spirals, a foliate band, simple fluting or ridging, or rosettes, or naturalistic motifs such as plant-shoots, running lions, swimming dolphins. A unique electrum cup was inlaid with niello bands dotted with gold discs and three separated gold cutouts, appearing to represent potted plants. 'Nestor's Cup' was plain, but had hawks surmounting its handles. Three large silver vases were decorated, a ewer with repoussé spirals, arcade and fluting, a krater with two duelling groups of warriors, and a conical rhyton with a very complex scene of a besieged city, apparently under attack from the sea. Niello was used on the first two, on the krater

6. BS, Pl. 30:75, cf. BSA 52 (1957), Pl. 9:a-b.

covering the whole background. There were also the three animal rhyta, the Lion's Head Rhyton of pure gold, the Bull's Head Rhyton of silver plated with gold in places and with gold-covered wood horns, and the Stag Rhyton of an alloy of silver and lead. There is no uniformity in this group, except for the early arcade-decorated cups.

Weapons might be decorated by cast or traced decoration on the blade, or by plates inlaid into it. Simple grooves and ridges along the midrib and blade were found on many swords, and running spirals separately or combined with these were found more than once. Two swords had figure-of-eight shields raised upon in the midrib; two swords and a dagger had running griffins in relief down the midrib or blade, and another sword running horses. One sword had a very complex decoration of interwoven strands on the midrib, two deep cross-ribbing along the midrib, and one ivy-leaves in relief springing from the midrib for some of its length and then plain grooves. A small group had motifs at the top of the blade, on either side of the midrib - butterflies, three joined spirals, and rosettes.⁷ The majority of these decorated swords were Type A, the Type B swords being plain or simply grooved: they formed a small proportion of the whole number of sword-blades.

Inlaid plates were only found on daggers. No two are the same: one was a silver plate with repoussé spirals, one a gold plate with traced niello-filled spirals, one a thin niello plate decorated with

7. SG, Pl. 92:751; Praktika 1952, 457, fig. 26; G.E. Mylonas, Mycenae and the Mycenaean Age (1966), fig. 95.

alternating gold lilies. The three best-known, true examples of the 'Metallmalerei' inlaying technique, were each inlaid with a bronze plate. On one of these were repoussé running lions, which were covered with gold leaf, and flanked by inlaid cutouts representing rocks; a second had, on one side a hunt-scene in which one lion is charging the hunters and two others are fleeing, and on the other, a lion bringing down a deer and two fleeing deer; the third had on both sides varied scenes of leopards attacking ducks by the side of a river.

In addition, a number of relatively plain weapons had fine hilts and pommels. Those covered with gold, or of ivory decorated with gold pins, have been noted above. The dagger inlaid with lilies had a gold hilt covered with rows of repoussé lilies, but a plain dagger had a hilt of gold inlaid with lapis lazuli, the handle being made up of linked quatrefoils from which two griffins' heads reach down, appearing to grip the blade (see FIG. 20). In a similar way, lions' heads reach down from the gold hilt of a sword in Grave Delta: its shoulders are also horned, and decorated to resemble bull's heads.⁸ Such weapons must have involved close co-operation between the metalworker and smith, the former producing the hilt, the latter fixing it to the blade.

Human and animal motifs may be found on many other objects: fighting warriors, men fighting or hunting animals, chariot-scenes, running, trotting, slinking or flying animals, a man's head, a deer with

8. Praktika 1952, 457, fig. 26.

its fawn, rampant horses, appear on the stelae, sealstones, rings and gems, on boxes and box-plates. A faience jug seems to have been decorated with single warriors, an ivory mirror-handle with the forepart of a lion. A fine amethyst gem from Grave Gamma, the 'portrait gem', showed a man's head in profile. These objects do not form true stylistic classes, but one may note resemblances. There are stock motifs of running or charging animals in the 'flying gallop' position, and of an escaping animal with its head turned back; the horses on the stelae all look very much the same, and the men on the gems and rings are similar, despite differences of equipment. There are surprising differences in the portrayal of lions and other animals; for instance, the puerile lions and griffins on a gold pommel-cover,⁹ and the odd creeping or trotting beasts on a wooden box and gold box-plate,¹⁰ are quite different in style from other portrayals of animals. With these exceptions, however, it does seem possible to talk of an 'animal style', produced with varying degrees of success on different objects.

In this material, there are objects of very probable foreign derivation, and others that are surely imitations of Cretan types. Among the former are the Stag Rhyton, which has good parallels for its stance and the spout on its back among the clay animal rhyta of

9. SG, Pl. 32:274.

10. SG, Pls. 32:109, 145:812-3.

MB Kultepe in Anatolia.¹¹ A gold pin surmounted by a ram from Shaft Grave IV has a silver parallel from EB Amorgos,¹² and might therefore belong to a Cycladic tradition. The 'goddess' pinhead from Grave III and a necklace of palm-leaf-shaped beads from Grave Omicron have parallels in the 'Aegina Treasure'. The shape of 'Hestor's Cup' resembles the Cretan stone chalice, the hawks on its handles may be compared with bird-pendants from the Aegina Treasure and Mallia.¹³ The Bull's Head and Lion's Head Rhyta are surely metal imitations of Cretan stone types, although the lion's head does not resemble the stone examples closely. Other parallels are more distant, that of the head-bands with an example from Assur, and the wire-spiral beads with a widespread Near Eastern type. In each case there is evidence that the type was already current in the Aegean, wire-spiral jewellery from a MH/LH grave at Thebes and a clay representation of the wire-spiral bead from a LM sanctuary,¹⁴ and the head-bands from the Aegina Treasure and Corinth.¹⁵

It is difficult to find a close ancestry for the styles that I have isolated, but their elements can be paralleled. The patterns of

11. T. and N. Özgüç, "Ausgrabungen in Kultepe", in Türk Tarih Kurumu 12 (1953), 223-4, Pls. 33-9.

12. Kykladika I, Pl. 8:66.

13. BSA 52 (1957), Pls. 9:c-e, 10, 15:f.

14. AthAA 1 (1968), 10, figs. 14-15; J.L. Myres, "The Sanctuary Site of Petsofa", in BSA 9 (1902-3), 379, Pl. 13:74.

15. BSA 52 (1957), Pl. 13:a; FIG. 15.

the 'complex geometric' style are surely related in some way to the traditions represented by the EM II sealings of Lerna and the EM II - MM II seals of Crete,¹⁶ although there is something of a gap in MM III.¹⁷ The 'heraldic' style of the confronted and addorsed animals on the cutouts may be compared with that of the bee-jewel from Chrysolakkos and a few sealings from Zakro,¹⁸ and their general balance and symmetry with pendants from the Aegina Treasure and a fine ornament from a MM III - LM IA tomb near Heraklion.¹⁹ Human and animal decoration seems to have been well-established on sealstones by the end of MM II,²⁰ including examples of the 'flying gallop'.²¹ Decorated metal vases and weapons have been found in Crete.²²

Distinctive contributions to and developments of these older styles were made at Mycenae. The animal art and the related scenes of

16. Hesperia 27 (1953), Pls. 20-22 (Lerna); V.E.G. Kenna, Cretan Seals (1960), Pls. 2:29, 31-2, 4:76, 79-80, 5:83, 6:114, 117, 8:197; D. Levi, "L'Archivio di Cretule a Festòs", in ASAtene 19-20 (1957-8), 89-99 (MM II).
17. Cf. however, BSA 52 (1957), Pls. 9:f, 14 (MM III?); Kenna, op.cit. (supra, note 16), Pl. 16: 10 B, 12 B (Zakro, LM IB context).
18. BSA 52 (1957), Pl. 15:e; PM I, 712, fig. 536 (Zakro, LM IB context).
19. BSA 12 (1957), Pls. 9:a-b, 10, 11:a, 15:i; Praktika 1967, Pl. 186:α.
20. Levi, op.cit. (supra, note 16), 109-31.
21. Levi, op.cit. (supra, note 16), 113, fig. 290, 116, fig. 298, ? 120, figs. 304, 306; cf. also 110, fig. 276 (very stylised).
22. C. Zervos, L'Art de la Crete (1956), 300-301 (swords and double axes), 393-9, figs. 591:left, 594; PM II, 481, fig. 288:c(Mochlos) (metal vases).

hunting and war cannot be paralleled in Crete at an early date, nor can the fully developed 'complex geometric' style. New classes such as the stelae and grave-masks were developed, the latter without any obvious ancestry, but the former combining styles and motifs of the smaller objects. The technique of 'Metallmalerei' may have been largely worked out at Mycenae. Each of these elements may be termed 'Shaft Grave art', but they hardly form a homogeneous whole; rather, they are typical of the 'royal' graves, and rare elsewhere.

Several of the techniques met with for the first time in the Shaft Graves were to survive on the mainland: in particular, decorated metal vases and weapons continued to be made. Stylistic descendants are another matter. The stelae and the masks are confined to Mycenae; there are only a few descendants of the great ornaments of gold plate.²³ Bone and ivory buttons and other objects, principally from Kakovatos tholos A, are decorated in a variant of the 'complex geometric' style'.²⁴ A comb from Routsis tholos 2 has a scene of leopards or wild cats attacking ducks.²⁵ Gold cutouts have been found in Messenia, but they include none of the Mycenae types, though parallel in the 'stiffness' of their style.²⁶ Battle and hunting

23. E.g. Praktika 1965, Pl. 134; KC 3 (1949), Pls. IA, IB.

24. AthMitt 34 (1909), 283-6, figs. 5-9, and Pl. 12:4; Praktika 1962, Pl. 102:β.

25. S. Marinatos and M. Hirmer, Crete and Mycenae (1960), fig. 222:bottom.

26. E.g. Praktika 1962, Pl. 99:α, 1965, Pl. 140:α, γ.

scenes continue to appear on Mycenaean sealstones.²⁷ As a generalisation, it is possible to say that the classes that do appear later are rarely of as fine workmanship; this is particularly true of the decorated and inlaid weapons, but the metal vases of later date do include some extremely fine examples, although there are ^{no} attempts to produce another Siege Rhyton or Battle Krater.

Many of the finest objects in the Shaft Graves, then, are brilliant but isolated achievements. For this reason, it does not seem that they can truly be said to represent a 'searching for style'.²⁸ The majority of the elements of the Shaft Grave complex, as represented especially in the 'royal' graves, were not repeated: the rich burial in the Vapheio tholos cist, for instance, has no really ornate jewellery, only two decorated metal vases, that are surely Cretan, a plain sword. There are traces of a similar tradition in Messenia; this may have survived longer, but again, the rich burials of Routsis tholos 2 show hardly anything similar. Classes of art rarely found, if at all, in the Shaft Graves, were to become typical of later Mycenaean burials, ivory-work, sealstones and relief-beads. The styles of the Shaft Graves then, are hardly in the direct line of ancestry of later Mycenaean art: at most, they established preferences for some types of animal and geometric ornament. Later art can be seen to be closely connected with Crete, and probably drew its inspiration from further Cretan influence rather than from the styles established in the Shaft Graves.

27. E.g. CMS I, 260-63, 298, 327, 331.

28. E.T. Vermeule, Greece in the Bronze Age (1964), 105.

(7) Summary

It is now time to consider the implications of the evidence that has been discussed, and to decide whether it is necessary to believe that the Shaft Grave people came from elsewhere. Many points have been advanced as evidence of foreign origin in the past, the grave-type, multiple-burial, the stelae, the masks, the use of chariots, much of the art, and the sudden access of wealth. There is also anthropological evidence and the evidence of a social change to be considered.

The remarkable nature of the Shaft Graves and their contents was most clearly apparent when only Grave Circle A was known. The discovery of a second circle, containing graves with a much wider range of wealth, has led to the view that the appearance of the Shaft Graves is a 'local flowering', the result of the reaction of Cretan influences on an increasingly prosperous MH population. There is no doubt that Circle B shows the process to have been more gradual than had been thought, and that the contrast between MH poverty and Shaft Grave wealth had been overdrawn. Nevertheless, there are many elements in the Shaft Graves that cannot be attributed merely to an access of wealth, and the problem does exist.

The great value of the Circle B evidence is to show what elements of the 'Shaft Grave culture' were always present, and what appeared during its history. There can be no doubt that a number of the Circle B graves are older than any in Circle A, although the richer graves seem from their contents to be contemporary with the earlier burials in Circle A. I have, I hope, demonstrated that the Shaft

Grave type, a rock-cut rectangular grave with a timber roof, supported on ledges some distance down the shaft, is almost confined to Mycenae and is the type of the earliest graves in Circle B. Certainly there are no other timber-roofed graves in Greece; equally certainly, it has no close parallels elsewhere for its most typical feature, the earth-filled shaft. Other timber-roofed graves of EB date at Alaca Hüyük in Anatolia, and dating from about 2000 B.C. onwards in eastern and east-central Europe, are roofed at the top of the cutting, and many of the European ones are covered by a tumulus, besides being quite clearly intended in some cases for miniature houses.¹ The fact that there are no foreign parallels, however, does not preclude its having a foreign origin, but simply makes it difficult to pin this origin to a particular area. The grave-type must remain one of the strongest arguments for a foreign origin.

One of the earliest Circle B graves, Zeta, contained a man, over 1.80 m. high, provided with a Type A sword. This combination of tall man and long weapon is completely typical of the Shaft Graves. Another early grave, Beta, contained a man provided with a dagger and some gold and electrum bands. These are not spectacular by the standards of the Aegean, but only one other mainland grave, at Corinth, held even a single gold band. New weapons and new wealth thus appear at the beginning of the Shaft Grave series. But the burials themselves do not have a strange appearance: in the smaller graves they

1. H. Gimbutas, Bronze Age Cultures in Central and Eastern Europe (1965), 135, 259, 536.

are contracted and laid on their sides, in the larger extended on their backs, and the floor is frequently strewn with pebbles. All these features may be paralleled in MH graves, and there are a certain number of graves in the Argolid-Corinthia containing a weapon and a number of vases, all of the MH Late Phase.

The Shaft Graves, however, soon begin to lose their resemblance to other MH burials. They become larger and deeper, the goods in them increase in value, markers may be erected over them, some sort of funeral meal is sometimes eaten and its remains left in the fill. At some stage, if not from the first, Circle B is surrounded by a wall. Stelae, often decorated, are erected over the later graves; they are frequently reopened, sometimes used for three burials, once for four and once for five. The burials in Circle B reach a certain height of prosperity comparable to the poorer ones in Circle A: a man will have several swords and other weapons and a metal cup, a woman several necklaces and ornaments of gold plate. But the 'royal' burials in Circle A, in Graves III, IV and V, contain quantities of material that are vastly out of proportion to the rest: gold vases and ornaments weighing a total of at least 13 kilogrammes, thirty vessels of silver and many other fragments, over fifty large vessels of copper and ten of lead, well over a hundred objects of bronze, mostly weapons, fourteen hundred ^{to 15} amber. There are no comparable hoards in the Aegean: the Aegina Treasure is minute by comparison, the burials of the Vapheio and Dendra tholoi rich but on a smaller scale.

The people buried in the graves show many signs of regarding

themselves as special. Their garments must have been stiff with gold; they wore great head-bands and crowns of it, a child was completely wrapped in it, the 'royal' men wore death-masks of it. They erected stelae which in some cases seem to show scenes in which the dead might have partaken, scenes of warfare and battles with animals; even more complicated monuments may once have stood over the graves. When burials in Grave Circle A ceased, its area was left undisturbed; it was never built over, and was eventually carefully refurbished, some of the stelae re-erected and a new wall built. Circle B, on the other hand, was forgotten; Tomb Rho was built within its circuit, maybe intentionally, but the cutting for the Tomb of Clytaemnestra broke its perimeter and the covering mound of the tomb would have completely covered the circle.

The abundance of weapons and the clear interest in war and hunting suggest strongly that these people were members of a 'heroic' warrior-society. This point has not been stressed enough; warfare was common enough in the ancient world, but the other societies of the Near East and the Aegean do not seem to have passed through this stage, but rather to have developed in a fairly orderly fashion from village to city. But similar societies were arising or had already arisen in barbarian Europe, where they were to survive for many centuries; even Mycenae itself never became a true city, and the Mycenaean culture seems to have centred more on citadels and palaces than on towns to its end.

The preceding MH society was, I have argued, a village society,

with very few signs of any sort of ruling class. It might well seem more likely that a ruling class should be imposed on such a society from without than that it should arise internally; yet we must remember that in barbarian Europe such a class does seem to have emerged of its own accord in some areas. This development is likely to be the result of superior intelligence, brawn or weapons; it may also have a religious background.

Here the anthropological evidence is most interesting.² This is based mainly on the skeletal material from Circle B, since very few skulls survived in Circle A and the rest of the bones seem to have been lost. Compared with the MH burials at Lerna, where over two hundred burials were studied, these people show a 'champions' physique'. They were an average of 6 cm. higher than the Lerna people, had thicker bones, big hands and feet, relatively massive heads and bodies and were strongly muscled. However, their life-expectancy was no higher. They seem to have been extremely mixed in physical type, although they lacked the 'delicate Mediterranean tendencies' found in a large section of the Lerna population; they did not show enough family characteristics to be considered a group related by blood. It was suggested that their superior physique was at least partly due to selection for physical prowess and a rich diet. To some extent this dodges the issue, for someone must have been doing the selecting and providing the food. From this point of view it is a pity that so

2. J.L. Angel, "Kings and Commoners" (summary), in AJA 61 (1957), 161.

little is known of the Circle A burials, who for other reasons can be regarded as a 'family'. Their ancestors are probably to be found in Circle B: the other burials may be seen as their retainers, maybe including relations. These people will certainly have had the physique to wield great weapons such as the Type A sword and long-bladed spear: several of them were over 1.80 m. (5ft. 11in.) tall, veritable giants in their day.

We have, then, evidence of an unusually tall group of people, using a unique type of tomb, provided with new weapons and some degree of wealth. Other features, such as their wearing of gold plate ornaments, use of chariots, erection of stelae, stand out. They seem to introduce a new type of society. Surely, one may argue, these are foreign invaders.

But this theory must face two major difficulties, the problems of where they came from and why they came to Mycenae. The latter is, I think, important, for it is fatally easy to credit Mycenae anachronistically with the position that it later enjoyed. In fact, the survey of the MH evidence suggests that Mycenae was a centre of some size; but there is no evidence that it enjoyed a special position in the Argolid. It might be argued that the hypothetical invaders took Mycenae as a base from which to extend their conquests; but it need have been no easier to conquer Mycenae than sites like Lerna or Tiryns, which were more strategically placed to dominate the Argive plain. Mycenae is well situated to cover the route from the Argive to the Corinthian plain, but even then is some way back in the hills

from the natural route; it is hardly an ideal site from which to attempt the conquest of the Argive plain.

The problem of where they came from is even more acute. The only substantial foreign element in the Shaft Graves material is Cretan, and it has long been agreed that the Shaft Grave people can not be Cretan. Mellaart has suggested an Anatolian origin for many of the classes of object, including the long sword, socketed spear, boar's tusk helmet and head-band, and has alluded to a gold mask supposedly found in Turkey.³ The mask, however, is far too similar to the 'Mask of Agamemnon' to be anything but a forgery; the weapons have perfectly good ancestors in Crete, the production of boar's tusk plates is one of the few LH industries, and the head-bands have Aegean parallels for their shape and cannot, at any rate, be closely paralleled in Anatolia. The only probable Anatolian object in the Shaft Graves is the Stag Rhyton; it is no more significant than is the presence of vases of Egyptian faience or Near Eastern glass beads.

A derivation of these people from anywhere in the Near East runs up against the problem that they just do not seem civilised enough, and that they have with them no characteristic artefacts of these regions. The inhabitants of Palestine, Syria and Anatolia had been living in walled towns for a considerable period, and had relatively advanced

3. J.A. Mellaart, "Anatolian Trade with Europe and Anatolian Geography and Culture Provinces in the Late Bronze Age", in AnatSt 18 (1968), 195.

cultures; but the earliest Shaft Grave burials are not strongly distinguishable from other MH burials. For this reason, it does not seem possible that these people can have been a group of chariot-users who swooped upon Greece; apart from the practical difficulties involved, such chariot-users should have come from the Near East somewhere.⁴

The absence of a characteristic group of foreign artefacts is another great stumbling-block. The weapons are of Cretan origin, the pottery is typical late MH, with a growing number of pieces obviously influenced by Cycladic and Cretan types if not imports, and the jewellery is heterogeneous, but only the plate ornaments and types already present in MH are common outside the 'royal' graves. If the hypothetical invaders had come from no further away than Albania, one would expect foreign pottery. They might conceivably be nomads who did not use much pottery; but then we return to the first problem, why they should choose to settle at Mycenae.

Is it possible, then, to square the unusual features noted with a local origin? I believe that it is just possible. The Argolid in late MH times has produced several cases of weapon-burials, and two of unusual types of grave, including the unique cremation at Argos. It is not impossible that the earliest users of shaft graves, having already achieved some success, adopted or evolved the shaft grave as a

4. Y. Yadin, The Art of Warfare in Biblical Lands (1963), 74-5, 86-9, on the spread of the chariot; cf. also H.W. Catling, "A Mycenaean Puzzle from Lefkandi in Euboea", in JEA 72 (1963), 42.

special type of grave. Admittedly, the earliest burials in such graves are completely without goods; but later graves such as Kappa are relatively poor in goods compared with their size, and it may be that nothing could be spared for the first burials, who include two large males (Graves Sigma and Alpha.1.).

It is also possible that there should be a family of unusually tall people at Mycenae. There was one unusually tall man in the Ailias cemetery at Knossos, between 1.73 and 1.80 m. high, and one man 1.75 m. high in Boria T. 4 at Volimidia.⁵ If such a family had existed, they might have dominated their neighbours physically. It is also possible to suggest from internal evidence that these people must have possessed considerable intelligence; for they seem to have perceived, as no other apparently did, the uses of the long sword, and later, when they were well-established, of the chariot. With these weapons and their superior physique they could have dominated far greater numbers of their MH neighbours. It is possible that the villages of the Argolid were already grouped in some primitive confederacy, and were thus more easily brought under the domination of Mycenae.

How this domination was achieved must remain uncertain, but the wealth of Mycenae is not conceivable unless it controlled a route to the sea, and the absence of comparable centres at an early stage elsewhere in the Argolid, or even, it seems in the Corinthia, suggests

5. R.-P. Charles, Anthropologie Archéologique de la Grèce (1965), 82 (T.12); S. Marinatos, in Praktika 1954, 302.

that Mycenae controlled the Argolid-Corinthia area from the beginning. Indeed, the range of their activities may have been much wider at first, before other provinces became organised. Late MH Greece does seem to have been becoming prosperous, and the wealth of Mycenae may be partly founded on taxation, extortion and rapine. There is no direct evidence that they were seafarers, but the spread of the angular Grey Minyan goblet certainly shows that some MH people were. If the rulers of Mycenae had extended their activities to the Aegean, they might swiftly have amassed remarkable wealth; the fortifications of Aegina, Aghia Irini and Phylakopi, dating from an earlier period, suggest that the Aegean was a troubled area. They might even have afflicted the coasts of Crete, have served as mercenaries for Cretan rulers, or have received 'subsidies' like many later groups of warlike barbarians.

The stelae and gold masks belong to the expansion of Mycenae's power and wealth rather than to its beginnings. Both classes are without parallel; they could have been inspired by vague rumours of Egyptian or Mesopotamian practice, but I do not think that any decision on this can be reached without the evidence of some parallel. They are certainly expressions of the importance and wealth of the burials over which they stand or with which they are laid, and are peculiar to Mycenae at this period, having no descendants. Similarly, the animal and 'complex geometric' styles must be viewed as developments within the Shaft Grave period, and I have suggested in Section 6 that they have Cretan roots. One might well expect such new and often peculiar manifestations of wealth in a newly rich society.

It seems fairly clear that the Cretans, perhaps particularly the rulers of Knossos, had some good reason for being on good terms with the rulers of Mycenae. It seems unlikely that they could have obtained craftsmen of such a high standard from anywhere but a palace, and some of the goods in the graves, like the gaming-board, look like gifts. The contacts of the rulers of Mycenae spread still further. They must have obtained not only their knowledge of chariots, but trainers, chariot-makers, and possibly blood-stock, from somewhere in the Near East. From central Europe they received great necklaces of amber.

It is possible to suggest that there is a connection here. I have already suggested that the reason for the remarkable amount of Aegean activity in out-of-the-way parts of Greece was the search for metal sources, including possibly the acquisition of central European metal, coming down to the Adriatic. If the rulers of Mycenae in some way managed to control this trade, to become middlemen or take tolls on the trade-routes, then they would have been in a good position to make their wishes felt. The early prosperity of Messenia may have been the result of Cretan attempts to by-pass the Argolid. If such a trade existed, then the materials sent in return from Mycenae or Crete are not traceable archaeologically; they may have included foodstuffs, textiles, wine and oil, even tin. The rulers of Mycenae were certainly able to get enough tin; once they were established, this, like other raw materials, would come to them. They may have exchanged a little of it for a lot of gold or copper. As the Amarna letters show, there seems to have been little idea of relative value in the ancient

world; the king of Assyria or Babylonia needs gold, but considers that it is as common as dust to the king of Egypt, who can therefore afford to give huge quantities, while they send lapis lazuli, other stonework, and chariots and trained horses in return.⁶ The only certainty in this picture is the presence of great quantities of amber at Mycenae: this cannot have been the commodity originally sought, but must have been sent, possibly as a gift, down an already existing trade-route.

Nothing has survived of the town of Mycenae at this period, but there is no reason to doubt that it was there. The intensive LH IIIA2-B building activity has removed almost all traces of earlier buildings. Under the Palace, below the East, West and Central Lobbies, was a fill of earth containing mainly LH I pottery with a few LH IIA sherds, under which was a deep fill of rough limestone blocks.⁷ The earth-fill also contained two fresco-fragments. These and the limestone blocks may be the remains of the earliest palace, or at least of a substantial building. The satellite villages for which there was evidence in the MH period probably continued, with the exception of the one in the area of Circle B. It is unlikely that there was a fortification; a wall thought to be MH (although in fact two of the associated sherds are LH IA) has proved to be LH IIIB.⁸ Indeed,

6. J.A.B. Mercer, The Tell El-Amarna Letters (1939), letters 1-29 (pp. 2-11).

7. Mycenae (BSA 25), 149-59.

8. K.A. Rowe, "A Possible Middle Helladic Fortification Wall", in BSA 49 (1954), 248-53; Pl. 42; bottom row, second and third from left are LH IA; G.E. Mylonas, Mycenae and the Mycenaean Age (1966), 15-16.

Mycenae can hardly have needed a fortification at this period, being adequately defended by its formidable warriors and weapons.

It must be stressed that the people of Mycenae were still barbarians compared with the Cretans and even the inhabitants of the island towns. Their adoption and adaptation of Cretan arts and skills does not seem to have been accompanied by a corresponding adoption of Cretan institutions. The appearance in the Shaft Graves of 'sacral knots' in faience, of gold cutouts shaped like goddesses, shrines and doubleaxes, and of rhyta of various sorts, suggests that they may have been influenced by Cretan religion. But their dress, taste and general style of life are far removed from the sophisticated, palace-oriented societies of Crete. The appearance of this 'heroic' society was not, however, an isolated phenomenon on the mainland, as the next chapter will show; but it may certainly be claimed to be the richest and most brilliant of the mainland, providing some reason for the use of the name 'Mycenaean' for the whole Late Bronze Age culture of the mainland.

APPENDIX: Summary List of the Contents of the Shaft Graves(1) Grave Circle B

Major References Preliminary reports by J. Papadimitriou in Praktika 1951, 197-203; 1952, 427-72; 1953, 205-37; 1954, 242-65.

G.E. Mylonas, Ancient Mycenae (1957), Ch. VI; Grave Circle B of Mycenae (1964); Mycenae and the Mycenaean Age (1966), 97-109.

G.E. Mylonas and J. Papadimitriou, "The New Shaft Graves of Mycenae", in Archaeology 5 (1952), 194-200; "The New Grave Circle of Mycenae", in Archaeology 8 (1955), 43-50.

This account must be regarded as provisional: there are discrepancies between the descriptions of Papadimitriou and Mylonas (in which I have generally followed the former), and some objects on show in the National Museum at Athens are not mentioned by either. I have only described those graves which have other contents besides pottery: the order is that of my text.

Grave Theta: 1 burial, dagger and several vases reported.

Grave Eta: 1 man. 1 dagger, 5 vases.

Grave Zeta: 1 man. 1 Type A sword with ivory pommel, 7 vases.

Grave Beta: 1 man. 1 dagger, 1 gold (or electrum) strip, 2 gold bands, 5 vases.

Grave Ypsilon: 1 woman. 1 gold head-dress; 2 silver earrings; a double necklace of gold, silver, carnelian and faience beads with a

central stone amulet; 1 silver and 3 bronze dress-pins, 1 of the latter having a rock-crystal head; 1 gold band, 3 bronze rings, 9 vases.

Grave Ki: In corner, bones of 1 adult, apparently woman, without goods; in centre, 1 small girl, with goods. 1 gold head-dress with pendant strings of rock crystal, amethyst and carnelian beads; 2 gold hair-spirals; 2 gold earrings; a necklace of rock crystal beads with a faience bead in the centre; 10 vases.

Grave Mu: In north-west corner, bones of 1 child, maybe girl, with 14 vases. In north-east corner, 2 vases, 3 bone pins. In centre, 1 adolescent girl or small woman, with goods. A necklace of rock crystal, amethyst, and carnelian beads, with a sealstone of carnelian in the centre; 5 vases.

Grave Epsilon: 1 woman; 20 teeth along the east side may belong to another burial. Many gold ornaments, including 2 oval bands, 5 half-bands and 4 stars; 1 ivory pin with gold-covered head; 4 bronze or copper vessels; at least 12 vases (many in fill).

Grave Omicron: (1) 1 adult, apparently woman, along west side; no goods with skeleton, but vases, and necklace of 4 clay and 2 steatite whorls, on roof, may belong to this burial.

(2) 1 woman, in centre. 2 gold head-bands; 2 gold earrings; 2 armlets of gold wire spirals; 5 dress pins (1 silver with gold-covered wooden head, 1 bronze with gold rosette-head, 3 bronze with rock crystal head); 5 necklaces (2 gold, 1 amber, 1 carnelian, 1 amethyst and carnelian), with 1 gold, 1 silver necklace-hook, and 1 carnelian sealstone, probably strung on necklace; 1 rock crystal bowl, 2

rectangular gold plates, 4 small round gold plates, ivory plates, at least 29 vases (of which at least 5 on roof or in fill).

Grave Iota: (1) 1 man, in south-west corner, with gold-rimmed silver cup.

(2) 1 man, in centre. 1 Type A sword with ivory pommel; 1 broad knife with rock crystal tube on tang; 1 pair of bronze tweezers; 2 gold wristlets, made up of 2 triangular gold bands; 2 gold 'garters'; at least 11 vases.

1 bone-mounted wooden staff also found.

Grave Lambda: (1) 1 man, against east wall. 1 knife; 2 obsidian arrowheads; 4 gold bands and 1 thin gold strip (clothing-ornaments).

(2) 1 man, in centre. Presumed goods, along west wall: 1 Type A sword with ivory pommel, in gold-decorated hide scabbard; 1 spear-head, with gold band on haft; 1 dagger with silver-decorated handle; 1 knife with ivory handle, in wood scabbard; 1 small knife; 28 flint and obsidian arrowheads.

At least 19 vases, only 4 of which were in the grave.

Grave Alpha: 2 men, 1 pushed against side, 1 in centre. 3 Type A swords; 1 short sword or long dagger, with inlaid silver plate; 2 silver vases (1 wrapped in linen); 2 bronze vases; 1 faience cup; 1 gold armlet; 1 gold 'garter'; 1 gold half-band; 1 fragment of gold band; 1 bronze pin with rock crystal head; perforated oval bone plates, 25 vases.

Grave Delta: 3 burials, 2 certainly and 1 probably men; last in corner, other two extended. 1 Type A sword with ivory pommel and

gold hilt-plates; 1 short sword or long dagger with ivory pommel; at least 1 other dagger; 2 knives, 1 with ivory-bound handle; 17 flint and 2 bronze arrowheads; 1 bronze basin; 1 whetstone; at least 6 vases, probably more, of which only 2 seem to have been found in the grave.

Grave Ihu: (1) 1 man on west side. 1 Type A sword with alabaster pommel, in leather scabbard; 1 spearhead, with gold band on haft; 1 dagger; 4 knives; 1 gold, 1 silver, 1 bronze vases; some plates of boar's tusk (from helmet?); 7-8 gold bands.

(2) 1 man in centre. 1 Type A sword with ivory pommel; 1 dagger with alabaster pommel; 1 bronze vase; 1 gold band (from collar of garment).

Some gold pommel-covers and small attachments; 1 marble vase; 15 vases, of which 10 were on the roof.

Grave Gamma: (1) 1 man and 1 woman, pushed against east wall. With man, 2 Type A swords, with ivory pommels; 1 spearhead; 1 dagger; 2 knives; probably also 1 gold cup, 1 gold 'garter', 1 gold head-band, 1 gold band. The last two may belong to the woman, whose only certain gift is a bronze belt.

(2) 1 man, extended along south wall; 3 vases.

(3) 1 man, in centre. 2 Type A, 1 Type B swords, with pommels of alabaster or ivory; 1 dagger with ivory handle; 2 long knives, and at least 1 other knife; 1 electrum face-mask; 1 silver-plated box, containing 1 gold cup, 1 rock crystal and several bronze beads, 1 amethyst sealstone; 1 bronze cup, containing 2 alabaster pommels. At least 40 vases, mostly in fill (9 painted vases said to be inside

but Papadimitriou enumerates at least 11).

On show in National Museum (some of these are attributed to Alpha, but are with objects, such as a spearhead and large knife, which can be definitely attributed to Gamma, and are not enumerated among the objects from Alpha): 3 daggers, 1 bronze pin, 1 comb of bone or ivory, 1 bronze pommel-cover.

(2) Grave Circle A

Major References Mycenae and Tiryns, Chs. VII-IX (Graves I-V).

C. Schuchhardt, Schliemann's Excavations (1891), Ch.IV, sections 3-10.

G. Karo, Die Schachtgräber von Mykenai (1930-33).

There are some discrepancies between the material recorded by Schliemann and Karo, which I have noted. The material from the richest graves is so great that I have recorded it by sub-headings and in column, to give a better idea of its quantity. The order is that of wealth.

Grave II: 1 man. 1 Type A sword; 1 spearhead; 1 dagger; 1 'razor' with silver-plated rivets; fragments of 4 varied knives, 1 with an ivory hilt; 1 gold cup; 1 faience jar; rim and fragments of 1-2 bronze vases; some fragments of ivory vessel(s); 2 vases, sherds.

Grave VI: 2 men, 1 heaped in corner, 1 in centre. 1 complete and 2 fragmentary Type A swords; 2 short Type B swords and 1 Type B dagger; 1 blade-fragment of another sword (1 Type A, 1 Type B and the

dagger have gold-plated rivets, 1 Type B has silver-plated rivets); 1 broad short sword or dagger with gold-plated rivets; 1 dagger with ivory hilt; 4 long spearheads; 1 'razor'; fragments of 2 broad and 2 narrow knives; 1 dagger-pommel of alabaster, 1 of ivory; some ivory hilt-plates; 1 gold cup; 2 gold 'garters'; 4 small gold double-plates; fragments of 1 silver and at least 3 large copper and bronze vases; 30 small gold studs or pins; 2 whetstones, 2 'arrow-polishers'; 1 pair of bronze tweezers; 1 bronze pin; 15 vases.

Grave I: 3 burials, all apparently women. 1 knife (Schliemann, 2); 1 silver cup, gold-plated rim of another; fragments of 1 large bronze vessel; 2 faience vases and fragments of at least 2 more; 3 fragments of decorated ivory vessels; 3 gold head-bands, 27 gold half-bands, 14 gold stars; 2 beads of amber, 2 of hard blue-black stone (Schliemann, agate), at least 30 of glass; 11 vases.

Grave V: A scatter of goods in the fill, including gold-plated buttons, fragments of bone or ivory, boar's tusk helmet-horns, and alabaster roundels with steatite discs inlaid (probably gaming pieces). 3 burials, 2 certainly, 1 almost certainly male; the latter, in the centre, may have been partly robbed.

(1) The Northern Burial (i) Certain goods: 1 gold face-mask, 1 plain gold breast-plate, 5 round gold plates; 1 gold sword-belt with fragment of sword attached, 2 swords with gold hilt- and scabbard-plates and ornaments (on right), 11 swords further to right; with the swords, 1 small rock crystal pendant in the shape of a jar, with silver handles, strung on silver wire; 1 funnel-shaped object of rock crystal; 1

alabaster vase-stand; 1 amber bead; 1 gold tassel; 1 gold pommel-cover; 3 gold-covered wood tubes; 124 gold-covered round buttons, 6 lozenge-shaped gold-covered buttons; 1 gold cup; 1 hexagonal wooden box, with 2 rows of gold plates.

(ii) Probable Goods (The wording in the German edition, lycenai (1878), 359-67, is clearer than the English edition; cf. also Schuchhardt, op.cit. (supra, p.321), 263): 5 gold cups, 5 silver cups and goblets, 1 large silver jug, 1 limestone cup; also fragments of 1 gold-rimmed silver cup, 3 silver vases, 1 silver vase with a copper bottom, and 2 large discs of silver-plated copper, probably from vases; 1 necklace of 12 gold beads (double-eagles pendent from bar); 5 round gold plates; 2 gold pommel-covers.

(2) The Central Burial Some round gold plates; fragments of a wooden comb. A heap of swords (Schliemann estimated over 60), spearheads, daggers and tools between this and the southern burial: Schliemann illustrates 1 Type B sword, and 1 chisel.

(3) The Southern Burial 1 gold face-mask, 1 decorated gold breast-plate; 1 gold arm-band; 15 swords (10 laid at feet), and fine gold hilt-plates of another; fragments of 2 silver vases; 1 alabaster vase, with gold and gold-plated wood fittings, containing 32 small and 3 large round gold-covered buttons, 2 lozenge-shaped gold covered buttons, 1 conical gold button, 1 wedge-shaped gold tube; 37 round gold plates, and 21 fragments of same; 1 pair of silver tweezers; many amber beads; 5 small plain gold tubes, one still containing wood; 7 alabaster pommels, and 1 of wood, all with golden rivets or pins; 1 gold toggle (from shield-strap?).

(4) Along the west wall: 7 copper vessels.

(5) Unattributable

Weapons Karo catalogued, in all, 15 Type A and 3 Type B swords, with the hilt-fragment of a fourth Type B, also 6 long blade-fragments, 34 small, and some bits, including 3 with gold-plated rivets; of the blades 3 Type A and 1 Type B had fine decoration, while others had grooved midribs, and many had gold- or silver-plated rivets; 3 ivory sword-pommels, the gold hilt-plates noted above, and gold scabbard-plates of 3-4 swords, were also found. 1 spearhead; 2 slashing weapons; 1 long curved knife with flanged hilt; 3 daggers (1 really a Type B short sword, with decorated blade; 3 with decorated plates inlaid in the blade; 1 with spiral-decorated midrib; 1 very small).

Precious Vases and Vessels Fragments of at least 6 silver vases, besides those mentioned.

1 complete ostrich-egg rhyton, with attached falcine dolphins; fragments of 2 others.

2 ivory-bound wooden boxes, 1 with sides decorated with animals in relief.

1 wooden dish.

Some inlays of ivory, bone, and rock crystal, probably from boxes or gaming-boards.

Necklaces and Clothing Ornaments, including War-Bear

1 pair gold 'garters'.

4 boar's tusks pierced for attachment; 2 ribbed boar's tusks, pierced in base; 20 plates of boar's tusk, 4 of them grooved; other shaped

pieces and fragments of boar's tusks (all from helmets probably).

1 silver toggle (from shield-strap?).

Karo catalogued 73 round gold plates and fragments of many more (55 all of same type); this will include those noted above.

Schliemann noted 340 gold-covered buttons, 256 decorated and 84 plain, but Karo only catalogued 189, with plates from 51.

Some fragments of gold-plated wood rosettes.

100 amber beads and many fragments; 1 glass bead; 1 long bone button.

Other Objects 3 bronze 'razors'; 3 whetstones.

1 ivory mirror-handle.

1 spoon, 1 pin and 1 tube of bone.

1 staff of cypress wood.

2 gold plates, ? from comb.

1 faience sacral knot (according to Schliemann; not in Karo).

1 faience fragment showing animal's belly, ? inlay.

3 vases and many fine sherds.

Grave III: 3 burials, almost certainly women; gold wrappings from 1 child.

Precious Vases and Vessels 6 gold vases; 2 silver vases; 1 shallow bronze vase.

6 large copper vases and fragments of at least 5 more.

Fragments of at least 9 faience vases.

1 bowl, 2 vases in shape of cupped hands, of alabaster.

4 gold plates and several fragments of gold cutouts, probably from sides of wooden boxes.

Head Gear, Dress-Ornaments, Necklaces and other Ornaments

(1) Of Gold 1 crown; 1 large head-band.

14 half-bands, and other fragments.

14 semi-oval plates with concave sides.

3 sets of 3 'stars'.

701 round plates (found all over bodies and tomb generally).

3 pairs of spiral-ended earrings; 1 pair of granulated earrings.

3 pairs of arm-bands of wire spirals.

2 short pins, 1 with double-stag head; heads of 4 others

(2 rosette-like 'stars', 1 linked-leaf, 1 double-eagle).

74 cutouts (including 11 double-stags, 9 octopuses, 8 double-cats, 6 displayed sphinxes, 6 running dogs).

27 gold beads, made up of cutouts back to back (20 octopi of two types, 6 wheels, 1 cross).

12 tubular beads with attached spirals.

27 beads pendant from bar (12 pomegranates, 3 butterflies, 7 lilies).

5 granulated globular beads; 1 long ribbed bead.

6 fragments of thin tubes, possibly from arm-bands; 10 fragments of gold pin-plating.

1 circlet of twisted wire with 4 spiral pendants; 1 other with 10 pendants, ? chrysalises (These may be children's toys).

1 rosette; 9 leaf-like pendants.

3 flattened-cylinder gems, that may have been strung on necklaces.

3 sets of scales.

Child's wrappings.

(2) Other Materials 1 head-band of electrum.

2 silver pins with gold heads; 1 flower-shaped, 1 pendent, in form of goddess with arms outstretched between palm-branches.

2 bronze pins with rock crystal heads; 2 more rock crystal heads.

2 large silver rings with plain bezel.

3 sealstones, 1 amygdaloid, of sardonyx, 2 lentoid, of amethyst and agate.

Beads: over 30 amber, 21 carnelian, 2 faience, 2 glass, 1 amethyst, 1 rock crystal, 1 bronze (Schliemann noted very many amber, 15 brown agate).

Other Objects

1 bronze knife; 2 sickle-like blades; 1 heavy nail; fragments of pins, including one with heavy tack-like head.

2 large copper rings.

1 vase; sherds of two more, and clay whorl, probably intrusive.

Grave IV: 5 burials, 3 certainly men, 2 almost certainly women.

Weapons 15 Type A, 6 Type B swords, 5 long blade-fragments and

50 small, also one fragment of decorated blade (Schliemann noted a

total of 46 swords, but included in this 10 slashing weapons and knives);

4 Type A, 1 Type B and a fragment had finely decorated blades, while

others had grooved midribs, and many had gold- or silver-plated rivets;

2 Type B had gold-plated and 2 gold-decorated ivory hilts, and there

was one other gold sword-hilt; pommels included 3 gold or gold-covered,

5 alabaster, 3 ivory; many fragments of gold scabbard-plates.

1 long spearhead, 1 short spearhead, 2 short spear- or javelin-heads.

9-10 slashing weapons; 3 long knives.

5 daggers (3 inlaid with decorated plates, 1 with gold-decorated ivory-hilt, 1 with gold and lapis lazuli hilt).

30 flint, 12 obsidian arrowheads.

Precious Vases and Vessels 11 gold vases, including the Lion's Head Rhyton and Nestor's Cup.

1 vase of electrum with gold and niello inlay.

10 silver vases, including the Battle Krater (with niello cover), the Bull's Head Rhyton (with gold fittings), the Siege Rhyton, and the Stag Rhyton (allow of silver and lead); 6 handles and 9 fragments of other silver vases (Schliemann noted 18 plain silver vases, 4 of them copper-plated basins or saucers); 1 silver lid; 1 silver figure-of-eight shield with handle.

1 gold-plated bronze vessel-rim; 1 gold-plated bronze jug-mouth.

32-3 large copper vessels.

At least 4 large lead vessels.

1 jug of alabaster; 1 kantharos and 1 cup of limestone.

1 ostrich egg rhyton.

1 rhyton-neck, 1 bowl, 1 platter and 1 ring of faience.

Inlays of faience, ivory and rock crystal from at least 1 gaming-board and several boxes.

Head-Gear, Clothing-Ornaments, Necklaces, and other Ornaments

(1) Of Gold 3 face-masks.

2 crowns; 8 head-bands (1 long and narrow with 3 pendants); 1 'star'.

1 breast-plate.

2 pairs of arm-bands; 1 heavy armlet, with attached silver and gold rosette.

2 pairs of 'garters', and 1 similar piece.

2 baldric or shield-straps with gold toggles.

757 gold-covered buttons and gold button-covers (Schliemann, 433).

259 gold rosette-cutouts (Schliemann, 110).

13 gold-covered lozenge-shaped buttons or plates, 1 a fragment

150 gold cutouts (of which 68 octopuses, 48 doubleaxes).

1 pin with ram on head, 2 shaped like antler tines.

3 decorated, 1 plain seal-rings, possibly strung on necklaces or hung from neck.

(2) Other Materials 1 plain silver seal-ring.

10 points, 62 curved plates, 20 rectangular plates and many fragments of boar's tusks (all probably from helmets).

39 perforated round bronze plates (from helmet?)

1290 amber beads (Schliemann noted two groups of over 400 each).

9 beads of amethyst.

1 bone ring; 4 bone roundels (horses' cheek-pieces?).

Other Objects

6 faience 'sacral knots'.

2 short knives, 10 fragments of others; fragments of 6-7 'razors'.

2 chisels; 1 thin four-edged tool with many rivets in long hilt.

1 trident with socket; 1 peculiar implement with curved edge, square perforation.

3 large bronze rods.

Done grip, decorated with lilies.

3 vases, fine sherds.

From Grave IV or V Handle and rim-fragment of silver bowl.

1 bronze cup; 1 copper or bronze handleless cup.

6 large lead cauldrons.

1 alabaster vase with long spout.

1 long dagger with ivory hilt.

1 knife; 2 'razors'.