

THE OXFORD HANDBOOK OF
.....
**THE BRONZE AGE
AEGEAN**
(ca. 3000–1000 BC)
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Edited by
ERIC H. CLINE

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CHAPTER 5

CRETE

PETER TOMKINS

ILSE SCHOEP

TRADITIONALLY, the story of the Cretan Early Bronze Age (hereafter Early Minoan) has been one constructed between two pivotal points of change. The first, at the Neolithic–EM I transition, is viewed as the birth of a culture considered to be definably Minoan (Betancourt 1999), fostered by a major impulse from the east, conventionally modeled as a migration (Evans 1928, 1–24; Warren 1973, 42–43; Hood 1990, 371–75; Nowicki 2002, 66–69). The second, at the transition to the Middle Bronze Age (MM IB), is seen as the emergence of Europe's first civilization—a redistributive theocracy of kings or princes, cities and palaces, art and writing—which in subsequent millennia spread to the rest of Europe, famously 'irradiating European "barbarism"' (Evans 1921, 26; Childe 1958, 70; Renfrew 1972, 51).

In the later language of neoevolutionism, the emergence of the palaces in MM IB marked the transition from an egalitarian to a more complex, statelike society with a clear hierarchical structure crowned by a central, administrative elite authority that resided in the palaces (Cherry 1986, 27). The long 'prepalatial' period that lay between these two traditional pivotal points tended to be defined in terms similar to those of the Neolithic and in opposition to the succeeding 'protopalatial' period (e.g., Cherry 1983, 33; 1986; Tomkins 2004, 39–40, table 3.1). Debate was at its sharpest over the pace of EM development, with many favoring a gradualist model of slow, incremental change with a notable increase in complexity from EM II (Renfrew 1972; Whitelaw 1983; Warren 1987; Branigan 1988; Soles 1988) and others a long, relatively static period followed by a rapid explosion of complexity around MM IB (Cherry 1983; 1984; Watrous 1987; 2001, 174–79).

RECENT PERSPECTIVES

The last two decades have seen dramatic advances in our understanding of the Early Minoan period. There has been not only a significant increase in the quantity and quality of data but also a broadening of the theoretical and analytical range and a more critical evaluation of Minoan archaeology's intellectual inheritance (for overviews see Manning 1994; Haggis 1999; Watrous 2001; Wilson 2008). The chronological framework first established by Arthur Evans has been given important new rigor and resolution thanks to a series of detailed stratigraphic and ceramic studies at Knossos, Phaistos, and other sites mainly in the center and east of the island (Wilson and Day 1994; 2000; Wilson 2007; Todaro 2005; Tomkins 2007b; Momigliano 2007; Papadatos, Tomkins, Nodarou, and Iliopoulos in press). Not only have there been new refinements such as early and late phases of EM I and EM IIA and a revised FN chronology, but much of the previous confusion about the phasing, labeling, and relationship of regional sequences, especially at the transition to and from the Early Bronze Age, has also been laid to rest.

As EM has come into clearer focus, the two traditional horizons of change have been pulled apart. The notion that EM I marks a sudden, new cultural beginning, in which Crete emerges from millennia of isolation under the stimulus of a wave of external migration, is gradually giving way to a more nuanced understanding of cultural development and change. Studies of ceramic and lithic material from Knossos now suggest that Neolithic Crete was always connected in some way to the rest of the Aegean but in ways that changed over time (Tomkins 2007b, 21–44; Conolly 2008). Moreover by the end of FN (FN IV; c.3300–3100/3000 BC; Tomkins 2007b), certain coastal sites already appear to have enjoyed preferential access to high-value materials and technologies (e.g., obsidian, metal) over inland sites in their vicinity in a manner reminiscent of later EM 'gateway communities' (Papadatos 2007, 2008; Tomkins 2008, 40; this volume; Papadatos, Tomkins, Nodarou, and Iliopoulos in press).

Likewise, marginal colonization of less productive or extensive areas of arable land, such as upland basins or islands, a process once considered to originate in EM I (e.g., Watrous 2001, 163, 168), actually begins as early as FN IV in some areas (e.g., Siteia uplands) (Tomkins 2008, 38–40). The beginning of EM I is thus emerging as a prominent point within a longer period of socioeconomic reconfiguration, a point privileged in traditional cultural histories mainly because of the appearance of painted ceramic wares. Explanations of change during this period now also need to take account of clear signs of residential, cultural, and technological continuity across the FN IV–EM I transition not just at large inland sites such as Knossos and Phaistos but also at those coastal sites, such as Petras Kephala, that appear to have been the main mediators of cultural interaction with the rest of the Aegean (Todaro 2005; Tomkins 2007b, 44; in press b; Todaro and Di Tonto 2008; Papadatos, Tomkins, Nodarou, and Iliopoulos in press).

In much the same way, many of the cultural features traditionally associated with an MM IB horizon have been realigned, stretching the timetable of 'emergence' to more than a millennium. Certain aspects of the traditional palatial model, such as permanent forms of social inequality, long-distance trade, specialized craft production, urbanism, settlement hierarchy, and central places, can now be identified in the Early Minoan period, well before MM IB (Wilson and Day 1994; Whitelaw et al. 1997; Day, Wilson, and Kiriati 1997; Knappett 1999; Schoep and Knappett 2004; Schoep 2006). In addition, our understanding of Minoan social complexity, which for so long was focused on a contentious search for steep social hierarchies and single elite authorities (Watrous 2001, 174–75), has been usefully broadened to include situations of weak hierarchy, where multiple groups compete for power (Haggis 1999; Schoep 2002; in press a).

The more we learn about the prehistoric past, the more arbitrary become the divisions between the blocks of time into which it is conventionally divided. In both of the preceding cases, an overestimation of later complexity, combined with difficulties in understanding what came before, led change to be simplified into origin points and dramatized into revolutions, a tendency by no means peculiar to Minoan archaeology (see Gamble 2007 for a recent critique). Clearly the burgeoning EM dataset demands a more inclusive and subtle interpretative framework, one that allows change to be assessed along a continuum stretching from the Neolithic to the Middle Bronze Age and recognizes that continuity and change are best understood, from the bottom up, as flowing from the actions of people operating under specific conditions of existence (Day, Wilson, and Kiriati 1997; Barrett and Damilati 2004; Tomkins 2004, 39–41).

One way of doing this is to focus on lower-level analytical categories of practice, context, and agency, such as production, burial, and the household, and to see how these change in articulation, context, scale, and meaning over time. From 'art' and writing to urbanism and monumental ceremonial centers, all that has been traditionally understood to characterize 'civilization' (Childe 1950; Renfrew 1972, 7, 13) may be understood to derive from the emergence and subsequent development of elite households, elite material culture, and the political cultures of production and consumption that sustained them (Baines and Yoffee 2000; Van Buren and Richards 2000; Wright 2004).

Production

During the Cretan later Neolithic, production appears to have been one area where households could compete for status by manipulating the quantity and quality of their productive output, albeit one regulated and restricted at a communal level (Tomkins 2004, 50–57; this volume; Isaakidou 2008, 108–13). During LN and FN, the technology and organization of local ceramic production at Knossos shows no sign of change and would be consistent with some form of low-level household specialization oriented towards the needs of the local community. This picture of

communally regulated productive stability first seems to be challenged from FN IV with the colonization of agriculturally more marginal areas of the Cretan landscape by a wave of farmers, perhaps forced out of older, more productive locations by the newly unfettered, acquisitive strategies of successful households (Halstead 2008, 244–47; Tomkins 2008, 38–42; this volume).

From the beginning of EM I, there are signs of a shift in ceramic production, characterized by the development of a new and distinctive range of burnished, slipped, and painted ware types, by marked regionality in material expression, by increasingly elaborate *chaînes opératoires*, and by rising productive intensity and output. This may mark the emergence of independent, regionally located, full-time specialists who were producing a range of distinctive products for a large, mainly local, external market (Wilson and Day 1994, 2000; Day, Wilson, and Kiriati 1997; Whitelaw et al. 1997). As in the Neolithic, access to the products of more distant Cretan producers provided opportunities for the marking of social differences through consumption (Whitelaw et al. 1997, 269; Wilson and Day 1994, 85; Tomkins 2004, 2007a).

In contrast to the spatial ubiquity of agricultural and ceramic production, the distribution of other, newer technologies producing high-value or 'prestige' products in stone or metal appears to be restricted to specific, prominent sites. Although earlier stone vessels are known, the first substantial indigenous stone vase industry on Crete dates from EM IIA (e.g., Mochlos; Bevan 2004, 112). Recent excavations at Petras Kephala have produced evidence for copper smelting and the use of copper punches in obsidian blade production from FN IV (Papadatos 2007, 2008; D'Annibale 2008), while from the beginning of EM I the biconical form, fenestrated pedestals, and decorative 'rivets' of ceramic chalices attest indirectly to the existence of sheet-metal containers. Two crucibles from the late EM I cemetery at Ayia Photia were probably used for the production of copper objects (Betancourt and Muhly 2007). Metallurgical debris in EM I–II levels at Poros indicates the deliberate production of arsenical copper alloys and the casting of mid-rib and long daggers (Doonan, Day, and Dimopoulou-Rethemniotaki 2007).

Although the evidence for copper production activity in the EBA Aegean is characterized by notable temporal and spatial variation (Catapotis 2007), the establishment by EM III of a specialized smelting site at Chrysokamino may mark an intensification in Cretan metallurgical production and perhaps a desire to regulate and control specific stages of the production process through spatial segregation (Betancourt 2006; Muhly 2002; cf. Nakou 1995; Broodbank 2000, 294–96). Such discoveries continue to affirm the connection between metallurgy, the production of prestige goods, and the marking of social difference (Renfrew 1972; Nakou 1995) but push its origins back into the last few centuries of FN. Intensification of metal production, the so-called *metallschok* of the EB II period, may now be pushed back into the late EM I (Doonan, Day, and Dimopoulou-Rethemniotaki 2007), while periods where metal objects are rarer, such as EM III, may more plausibly reflect differences in depositional practice than fluctuations in the supply of metal or metal objects (Nakou 1995 2007).

Exchange

For the later Neolithic stylistic and petrographic analyses suggest a low-volume circulation of ceramic vessels, compatible with gift exchange, over short and long distances between different communities within and occasionally beyond the island (Tomkins and Day 2001; Tomkins, Day, and Kilikoglou 2004; Tomkins 2004, 48; 2007b; 2008, 41). By FN IV, it would appear that certain coastal sites such as Nerokourou and Petras Kephala enjoyed a more intimate and intense relationship with the Aegean, specifically the Attic-Kephala region, in which the low-volume procurement and technological transformation of rare materials such as obsidian and metal, as well as control over their subsequent distribution within Crete, played a defining role (Vagnetti 1996; Carter 1998; Papadatos 2007; 2008; Tomkins 2008, 40; this volume; Papadatos, Tomkins, Nodarou, and Iliopoulos in press).

During EM, trading sites that focused on the procurement and working of greater volumes of obsidian, metal, and stone have been identified at Poros, Mochlos, and other locations along the north coast of Crete (Warren 1965, 28–36; Branigan 1991; Dimopoulou-Rethemiotaki, Wilson, and Day 2007). Late in EM I and into EM IIA, off-island relationships further intensify, as indicated by an increase in Cycladic imports (Kampos and Keros-Syros Groups) and raw materials (e.g., obsidian, copper, lead, silver), the local production of material culture in Cycladic styles or technologies, and a possible relocation of Cycladic groups to sites such as Ayia Photia or Poros, along the north coast of Crete (Renfrew 1964; Warren 1984; Karantzali 1996; Day, Wilson and Kiriati 1998; Papadatos 2005; Dimopoulou-Rethemiotaki Wilson, and Peter M. Day 2007).

From EM IIB, there are signs of a shift in the nature and directionality of external relations. At EM IIB Poros and Knossos, imports from the Cyclades entirely disappear while those from the east of the island increase (Wilson 1994, 41–44; Dimopoulou-Rethemiotaki, Wilson, and Day 2007, 87, 93). Cycladic imports are rare in EM III and increase only in MM I (Momigliano and Wilson 1996, 55). Nevertheless, the continued presence of Cycladic raw materials (e.g., obsidian, copper) in EM IIB Cretan contexts and Cretan exports in EC IIB (Kastri Group; e.g., Akrotiri; Day pers. comm.) suggests that this was not an absence of contact but a shift in the nature of Cretan-Cycladic trading activity.

During EM II–III, the presence of Egyptian and Syrian imports and local Cretan imitations indicate contact with East Mediterranean sites, probably to be connected with the adoption of the masted sailing ship, representations of which appear on Cretan seals from EM III (Evans 1925; Broodbank 2000, 341–49; Bevan 2004, 111–21). Although low in volume, such contacts were critical in ensuring the supply of exotic prestige goods and technologies that were so essential to emergent elites (Sherratt and Sherratt 1991; Schoep 2006), as suggested by the consistent presence of imports or imitations of off-island material culture in funerary contexts throughout the Early Bronze Age. In this way, Cretan elite culture appears to exhibit a shift from favoring Aegean to Eastern Mediterranean models and forms during the course of the Early Bronze Age (Schoep 2006).

Sealing, Writing, and Administration

Seals and sealings are present on Crete from EM II and appear at broadly the same time as on the Greek mainland (e.g., Lerna, Geraki). Whereas Early Minoan seals are attested primarily in grave contexts, sealings are usually found in nonfunerary contexts. Although, two sealings from an EM IIA fill below the West Court at Knossos have recently been redated on stylistic grounds to EM III/MM I (see references in Krzyszkowska 2005, 78), restudy of context and associated pottery argues in favor of the original EM IIA date. Sealings dating to EM IIB have been found at both small (Myrtos, Trypeti) and larger, proto-urban settlements (e.g. Malia, within court building; for references see Schoep 2004). Although the quantity of sealings is very small, especially compared to the Greek mainland, their social importance should not be underestimated.

The varied findspots of EM sealings suggest that this was not an isolated, local practice (contra Weingarten 1994). Rather, the practice of sealing needs to be situated within the wider context of the emergence and development of elite identities and elite culture. The attestation of sealings on Crete is important because the practice of sealing lumps of clay with seal stones is not an Aegean invention but, like script, is adopted from outside and adapted to suit local needs. Although typologically similar to sealings from regions further east, Cretan sealings were used differently and in a way that clearly did not involve a hierarchically organized bureaucratic administration (Weingarten 2000, 147).

On present evidence, script appeared slightly later, the oldest examples being the 'Archanes script,' attested on several seal stones from the Phourni cemetery in MM IA or at the latest MM IB contexts. There can be no doubt that these represent a real script (i.e., signs conveying phonetic values) since some sign groups are later attested in Linear A and Cretan Hieroglyphic documents (for different views, see Godart 1999 and Olivier 1996). The possibility of still earlier attestations of writing is hinted at by the incised signs found on nonjoining fragments of a vase of EM III type from Malia (Schoep and Allegrette 1999).

The significance of the EM evidence for the origins of administration has been hotly debated (Vlasaki and Hallager 1995; Weingarten 1990; Pini 1990). It was long assumed that the appearance of script implied the existence of a complex bureaucracy and was thus associated with an MM IB horizon of palace-building and, in particular, the economic needs of a managerial elite resident in the palaces (Weingarten 1990, 1994; Olivier 1989). The handful of known EM sealings tended to be judged unfavorably from the perspective of later and larger MM II collections (e.g., Phaistos) and dismissed as evidence for administration (Weingarten 1990; see Pini 1990 and Schoep 1999 for an alternative view).

More recently, it has been recognized that there is no need to make a direct equation between the presence of administrative documents and centralized economic control (Weingarten 2000; Schoep 2004). Sealing and writing also have important social and symbolic connotations, especially as markers of privilege and difference (Postgate, Wang, and Wilkinson 1995), and the logic behind their deployment at

EM sites may have been social and symbolic rather than strictly economic (Schoep 2004). Certainly the deposition of seal stones with early script in funerary contexts, as at Phourni, suggests that they played a role in the marking of identity and social difference (Schoep 2006).

Settlement and Urbanism

From FN IV, it is possible to identify three distinct dwelling strategies tied to different parts of the Cretan landscape, each of which exhibits differing long-term growth potentials (Whitelaw 2004; Tomkins this volume): agricultural sites, located in extensive and productive agricultural hinterlands (e.g., Knossos, Malia); trading sites, located on the coast (e.g., Petras Kephala, Mochlos, Poros); and marginal sites, located in less productive, predictable or extensive agricultural environments (e.g., Ziros region in east Crete; Branigan 1998; Halstead 2008; Tomkins 2008, 38–40). By EM II, many of the more extreme marginal areas see a contraction in settlement or abandonment (e.g., Branigan 1998). Marginal sites that thrived in EM II, such as the hamlets of Myrtos Fournou Korifi or Trypeti (Whitelaw 1983, 2004; Whitelaw et al. 1997), did so in part because of their position within wider exchange networks, often facilitated by a coastal location. This combination of marginal and trading strategies sustained a string of EM village communities around the Cretan coast, whose prospects for further expansion were, nevertheless, curtailed by the limited size or productivity of their agricultural hinterlands (Haggis 1999, 67; Whitelaw 2004).

During EM II, many agricultural sites (e.g., Knossos, Malia) undergo a phase of growth, which, though dwarfed by the scale of later expansions (e.g., Whitelaw 2004, 243, figure 13.8), represents a doubling or more of their Neolithic or EM I extent (Whitelaw 1983; Watrous 2001, 167; Tomkins 2008, 37–38). A similar pattern of growth, associated with an early stage of urbanism, may be identified in other regions of the EB II Aegean (Halstead 1981, 196–200; Hägg and Konsola 1986). Significantly, this expansion took these sites for the first time beyond the organizational threshold of the village, indirectly implying that social restructuring had taken place (cf. Whitelaw 1983).

Further growth at these proto-urban centers took place during EM III–MM IA, and in some areas this may be linked to a wave of small rural sites, which have been associated with agricultural intensification and extensification (Haggis 1999, 61–65). Although the generation of ever-greater agricultural surpluses was essential to growth (Manning 1994; Haggis 1999), the newly emerging EM II–III social hierarchies also needed to secure privileged access to the prestige goods and knowledge that flowed through trading sites. Agricultural sites located on coastal plains, such as Malia and Palaikastro, were well placed to combine agricultural and trading strategies in this way; inland sites such as Knossos and Phaistos, rooted in deeper Neolithic histories of place, were not. In the case of Knossos, this was perhaps resolved by the foundation in EM I of the nearby trading site of Poros, with which it enjoyed a close, symbiotic relationship for the rest of the Bronze Age (Dimopoulou-Rethemiotaki, Wilson, and Day 2007).

Claims of site hierarchies of three or more tiers from as early as EM I, on the basis of site size alone (e.g., Hayden, Moody, and Rackham 1992; Watrous et al. 1993; Driessen 2001), are thus probably premature in projecting stratified or hierarchical relationships onto what appears to have been a diversified but not an obviously politically integrated landscape (cf. Haggis 2002). Evidence for integration becomes less ambiguous only when demographic expansion at a center is of an order that exceeds the carrying capacity of its immediate hinterland and thus implies an extension of control over neighboring polities. In the case of Knossos, one of the most developed of the EM proto-urban centers, this is unlikely to have taken place before MM IA (Whitelaw 2004, 245).

Central Places and Arenas of Consumption

Recent work at Knossos, Malia, and Phaistos shows that the Middle Minoan court buildings are built on top of or incorporate elements of Early Bronze Age buildings also constructed around a large court. At Knossos, the origins of the open spaces of the central and west courts may be traced back to the end of FN (Tomkins 2007b, 41–42; in press b), while the construction of the first court buildings may be plausibly associated with a series of large-scale terracing and leveling episodes during EM II that transformed the summit of the Kephala Hill into a large, platform with specific, restricted ramped access points (Wilson 1994; Tomkins in press b for a discussion). Further such episodes of construction and modification during EM III, MM IA and MM IB created the monumental structure which convention terms the ‘First Palace’ (MacGillivray 1994; Tomkins in press b).

At Malia, remains of a large EM IIB building, beneath and on an orientation similar to that of the First Palace and laid out to the north and west of a large open space, have been brought to light in a series of tests (Pelon 1992; contra Watrous 2001, 171, 175). The ‘First Palace’ at Malia seems to have been constructed in EM III/MM IA, but, perhaps significantly, this building seems in one area (Magazine I1) to have deliberately incorporated part of its predecessor, namely a sort of vault with EM IIB vases in situ.

At Phaistos, the monumental structure known as the First Palace was constructed in MM IB and MM IIA. However, it has recently been shown that the open areas of the Lower West Court and the Central Court, as at Knossos, have a history of use going back to late FN (FN III–IV), when there is evidence to suggest that they were frequented for ritualized gatherings involving large-scale group consumption of liquids and foodstuffs (Todaro and Di Tonto 2008). Moreover, a sequence of monumental ramped entrances connecting these two areas can be traced back to EM II (Todaro in press). Such work provides a new context within which to situate enigmatic stretches of monumental EM IIB architecture at Palaikastro, Tyliisos, and Mochlos (Branigan 1988, 43–44; Schoep 1999; Haggis 1999, 61–62).

What unites these monumental central places is the presence of formalized open spaces or courts, the origins of which may be traced at least as far back as the

end of FN, if not deeper into the Neolithic (Tomkins 2004, 43–45; 2007a, 187–90; in press b; Todaro and Di Tonto 2008). During FN IV–EM III, other arenas used for communal ritual include built tombs and natural places such as caves, hilltops, and mountain peaks (Haggis 1999, 73–79; Tomkins in press a). In this way, the appearance in EM II of large public buildings in association with courts at large settlements such as Knossos, Malia, and Phaistos should be understood, on the one hand, as being rooted within deeper histories and traditions of communal ritual practice, but, on the other, as bound up with strategies of social restructuring and reproduction at the newly emergent and expanding proto-urban centers (Schoep in press a; Tomkins in press b). In this way the first court buildings mark the birth of a new type of communal space, out of which the later palaces would eventually develop. Much detail remains to be learned about the biographies of construction and renewal of the EM court buildings, the nature of the practices that went on within them, and the social relations and values that such practices reproduced (Schoep this volume). There are, however, good reasons for thinking that communal arenas at all scales served as formal places where groups of people could come together to construct and experience a sense of their place in the world through ritual practice.

A key component of communal ritual is commensality, and consideration of its changing articulation during the Neolithic and Bronze Age can reveal additional insights into social relations. At present, commensality during EM is perhaps best appreciated from the perspective of the containers used. During EM I–IIA, consumption of food and drink took place using individual sets of vessels whose form and size are suggestive of consumption by household groups (Wilson and Day 2000, 59–60), albeit relatively small in scale and similar to that which characterized the Neolithic (Tomkins 2007a).

The introduction of the footed goblet late in EM IIA (Wilson 2007, 64) thus marks a significant shift in the structure of commensality toward a larger group of people consuming smaller, equal, and more measured quantities (Wilson and Day 2000). The possibility remains strong that the ubiquitous ceramic goblet functioned alongside rarer and now largely absent containers in metal or stone (Nakou 2007) in a hierarchy of container value, which via commensality could have reproduced similarly asymmetrical relationships in people (cf. Macdonald and Knappett 2007). In this we might perhaps be glimpsing the beginning of a process of growth and extension to the later Neolithic household unit (see Tomkins this volume for a discussion), whereby larger and more complex corporate groups were formed, perhaps composed of a privileged (elite) social group and their affiliates and dependents.

Burial

Easily overlooked and often glossed as egalitarian, when approached from the perspective of later burial, the nature and significance of Early Minoan funerary practice is perhaps best appreciated when set against what went before.

During the Cretan Neolithic, grave goods are as good as absent, and human skeletal material is extremely rare, confined mainly to isolated fragments and occasional interments in settlement contexts or caves (Triantaphyllou 2008; Tomkins in press a). A high degree of selection must have been involved, with the vast majority of people receiving no archaeologically visible form of disposal.

Thus, one of the more striking changes to occur at the beginning of EM I, if not slightly earlier in FN IV, is the marked increase in visible forms of burial, typically in locations beyond the space of habitation. Initially these appear in caves or rock shelters (Branigan 1993, 152–54; Tomkins in press a), but from EM I these are joined by purpose-built round tombs or ‘tholoi’ (south-central Crete; e.g., Branigan 1970, 1993; Warren 2004; Tomkins 2007b, 20, table 1.6, 46–48) and cemeteries (Davaras and Betancourt 2004), and from EM II by house tombs (Soles 1992). This explosion in visible forms of burial may be understood as reflecting increased social competition, in particular a new interest in death as a means of marking status differences among the living, and a greater desire to use ritual as a means of appropriating or contesting the ownership of particular, strategic places in the landscape.

The development of conspicuous burial foci forms part of a broader EM expansion in the materiality and theatricality of death. From the carrying of the dead to their final resting place to funerary commensality (Hamilakis 1998, 124–26), the construction and use of permanent burial monuments offered new possibilities for the dramatization of social difference through funerary practice. From EM I, these practices included the interment of grave goods such as bronze daggers, gold jewelry, gold diadems, seal stones, amulets, pendants, and beads—high-value items in rare materials, which could be worn upon the person as markers of identity and status (Nakou 1995; Colburn 2008; Schoep in press a) and whose removal from circulation may have marked a form of conspicuous consumption. The presence from EM II of artifacts associated with personal body maintenance, such as obsidian blades or metal tweezers, suggests an interest in marking social differences by techniques of corporal inscription (Carter 1994; 1996; Doonan, Day, and Dimopoulou-Rethemiotaki 2007, 117).

Taken together, the EM burial data broadly indicate a situation of social competition and diversification, but not one that was necessarily always strongly hierarchical. While we cannot entirely exclude the possibility that a section of the population could be excluded from formal burial, estimates suggest that most people did have access (Whitelaw 1983). This burying population appears to have been eager to advertise identity and status through the display and disposal of valued material and symbolic resources. Sustained and systematic differences in wealth and status may on occasion be identified within this burying group, principally in the cemeteries attached to larger, wealthier communities such as Mochlos, Malia, Platanos, and Koumasa (Whitelaw 1983, 2004, 235–38; Soles 1988; 1992; Branigan 1993, 111).

THE EMERGENCE OF ELITE HOUSEHOLDS AND ELITE CULTURE

During the Neolithic and Early Bronze Age, at least two related units of social organization may be identified: the household, represented by discrete architectural units or houses, and the community, composed of agglomerations of coexisting households (see Halstead 1999; Tomkins 2004; this volume). In general, social change during this period can be read as a progression away from a communal model of society, where households are subordinate to and regulated by higher-level or communal forms of organization, to one where the communal becomes subordinate to the interests of specific households, who take responsibility for the ongoing wellbeing of the community and become the main (elite) agents of socioeconomic development. The appropriation of the communal thus formed a central role in the emergence of elite households on Crete between FN IV and EM III and may be glimpsed in the development not only of specific arenas (e.g., courts, tombs), where hierarchies of space could increasingly be exploited to incorporate, exclude, and thus define differential identity and status within and between communities, but also of an elite culture of objects, practices and knowledge, which from the end of the Neolithic drew increasingly on off-island sources in order to reproduce and legitimate social affiliation and difference.

From FN IV and through EM, Cretan communities appear to have been quick to diversify and differentiate themselves socially and economically but slow to integrate politically (Haggis 2002; Whitelaw 2004). The most successful, measured in terms of demographic growth, were those like Malia and Knossos-Poros, which were located in environments where trading, specifically access to and control over the resource of distance, might be combined with an ability to generate large agricultural surpluses. While there was a clear shifting of gears during the EM II period, sustained and extended during EM III (Haggis 1999, 61–65), it is only during MM I that there are signs of a major acceleration in growth significant enough to imply the development of larger-scale organizational forms and only then in the vicinity of the larger urban polities such as Knossos, Malia, and Phaistos. Outside the still-limited orbit of these urban centers, Crete remained a mosaic of independent and often tiny polities, operating at different scales and controlled by small-time, local elites who would, during the Middle Bronze Age, increasingly look to affiliate themselves with wealthier and better-connected elites in one or more of the larger, urban centers.

BIBLIOGRAPHY

- Baines, John, and Norman Yoffee. 2000. "Order, Legitimacy, and Wealth: Setting the Terms." In *Order, Legitimacy, and Wealth in Ancient States*, ed. Janet Richards and Mary Van Buren, 13–17. New York: Cambridge University Press.
- Barrett, John C., and Kristalli Damilati. 2004. "Some Light on the Early Origins of Them All: Generalization and the Explanation of Civilization Revisited." In *Emergence of Civilization Revisited*, 145–69.
- Betancourt, Philip P. 1999. "What Is Minoan? FN/EM I in the Gulf of Mirabello Region." In *Meletemata*, 33–39.
- Betancourt, Philip P. 2006. *The Chrysokamino Metallurgy Workshop and its Territory*. Hesperia Supplement 36. American School of Classical Studies/Oxbow Press.
- , and James Muhly. 2007. "The Crucibles from the Aghia Photia Cemetery." In *Metallurgy in the Early Bronze Age Aegean*, ed. Peter M. Day and Roger C. P. Doonan, 146–53. Sheffield Studies in Aegean Archaeology 7. Oxford: Oxbow.
- Bevan, Andrew. 2004. "Emerging Civilized Values? The Consumption and Imitation of Egyptian Stone Vessels in EM II–MM I Crete and Its Wider Eastern Mediterranean Context." In *Emergence of Civilization Revisited*, 107–26.
- Branigan, Keith. 1970. *The Tombs of Mesara*. London: Duckworth.
- . 1974. *Aegean Metalwork of the Early and Middle Bronze Age*. Oxford University Press.
- . 1988. *Pre-palatial: The Foundations of Palatial Crete: A Survey of Crete in the Early Bronze Age*. Amsterdam: Hakkert.
- . 1991. "Funerary Ritual and Social Cohesion in EBA Crete." *JMS* 1(2): 9–13.
- . 1993. *Dancing with Death: Life and Death in Southern Crete c. 3000–2000 B.C.* Amsterdam: Hakkert.
- . 1998. "Prehistoric and Early Settlement in the Ziros Region, Eastern Crete." *BSA* 93: 23–90.
- Broodbank, Cyprian. 2000. *An Island Archaeology of the Early Cyclades*. New York: Cambridge University Press.
- Carter, Tristan. 1994. "Southern Aegean Fashion Victims: An Overlooked Aspect of Early Bronze Age Burial Practices." In *Stories in Stone*, ed. Nick Ashton and Andrew David, 127–44. Lithics Study Society Occasional Paper 4. London: Lithics Study Society.
- . 1996. "Blood from Stones: Obsidian, Death, and Ethnicity in the Early Bronze Age." *BICS* 41: 142–43.
- . 1998. "The Chipped Stone." *BSA* 93: 47–50.
- Catapotis, Michalis. 2007. "On the Spatial Organization of Copper Smelting Activities in the Southern Aegean during the Early Bronze Age." In *Metallurgy in the Early Bronze Age Aegean*, ed. Peter M. Day and Roger C. P. Doonan, 207–23. Sheffield Studies in Aegean Archaeology 7. Oxford: Oxbow.
- Cherry, John. 1983. "Evolution, Revolution, and the Origins of Complex Society in Minoan Crete." In *Minoan Society*, 33–46.
- . 1984. "The Emergence of the State in the Prehistoric Aegean." *PCPS* 210, n.s., 30: 18–48.
- . 1986. "Polities and Palaces: Some Problems in Minoan State Formation." In *Peer Polity Interaction and Socio-Political Change*, ed. Colin Renfrew and John Cherry, 19–45. New York: Cambridge University Press.
- Childe, V. Gordon. 1950. "The Urban Revolution." *Town Planning Review* 21(1): 3–19.
- . 1958. "Retrospect." *Antiquity* 32: 69–74.
- Colburn, Cynthia. 2008. "Exotica and the Early Minoan Elite: Eastern Imports in Prepalatial Crete." *AJA* 112(2): 203–24.
- Conolly, James. 2008. "The Knapped Stone Technology of the First Occupants at Knossos." In *Escaping the Labyrinth*, 73–89.
- D'Annibale, Cesare. 2008. "Obsidian in Transition: The Technological Reorganization of the Obsidian Industry from Petras Kephala (Siteia) between Final Neolithic IV and Early Minoan I." In *Escaping the Labyrinth*, 191–200.

- Davaras, Costis, and Philip P. Betancourt. 2004. *The Hagia Photia Cemetery*, vol. 1. Philadelphia: INSTAP Academic Press.
- Day, Peter M., and Roger C. P. Doonan. 2007. *Metallurgy in the Early Bronze Age Aegean*. Sheffield Studies in Aegean Archaeology 7. Oxford: Oxbow.
- Day, Peter M., David E. Wilson, and Evangelia Kiriatzi. 1997. "Reassessing Specialization in Prepalatial Cretan Ceramic Production." In *TEXNH*, 275–89.
- Day, Peter M., David E. Wilson, and Evangelia Kiriatzi. 1998. "Pots, Labels, and People: Burying Ethnicity in the Cemetery at Aghia Photia, Siteias." In *Cemetery and Society*, 133–49.
- Dimopoulou-Rethemiotaki, Nota, David E. Wilson, and Peter M. Day. 2007. "The Earlier Prepalatial Settlement of Poros-Katsambas: Craft Production and Exchange at the Harbour Town of Knossos." In *Metallurgy in the Early Bronze Age Aegean*, ed. Peter M. Day and Roger C. P. Doonan, 84–97. Sheffield Studies in Aegean Archaeology 7. Oxford: Oxbow.
- Doonan, Roger, Peter M. Day, and Nota Dimopoulou-Rethemiotaki. 2007. "Lame Excuses for Emerging Complexity in Early Bronze Age Crete: The Metallurgical Finds from Poros-Katsambas and Their Context." In *Metallurgy in the Early Bronze Age Aegean*, ed. Peter M. Day and Roger C. P. Doonan, 98–122. Sheffield Studies in Aegean Archaeology 7. Oxford: Oxbow.
- Driessen, Jan. 2001. "History and Hierarchy: Preliminary Observations on the Settlement Pattern of Minoan Crete." In *Urbanism*, 51–71.
- Evans, Arthur. 1921. *PM*, vol. 1.
- . 1925. "The Early Nilotic, Libyan and Egyptian Relations with Minoan Crete." *Journal of the Royal Anthropological Institute of Great Britain and Ireland* 55: 199–228.
- . 1928. *PM*, vol. 2.
- Gamble, Clive. 2007. *Origins and Revolutions: Human Identity in Earliest Prehistory*. New York: Cambridge University Press.
- Godart, Louis. 1999. "L'écriture d'Arkhanès: Hiéroglyphique ou Linéaire A?" In *Meletemata*, 299–302.
- Hägg, Robin, and Dora Konsola. 1986. *Early Helladic Architecture*.
- Haggis, Donald C. 1999. "Staple Finance, Peak Sanctuaries, and Economic Complexity in Late Prepalatial Crete." In *From Minoan Farmers to Roman Traders: Sidelights on the Economy of Ancient Crete*, ed. Angelos Chaniotis, 53–86. Stuttgart: Franz Steiner.
- . 2002. "Integration and Complexity in the Late Prepalatial Period: A View from the Countryside in Eastern Crete." In *Labyrinth Revisited: Rethinking 'Minoan' Archaeology*, ed. Yiannis Hamilakis, 120–42. Oxford: Oxbow.
- Halstead, Paul. 1981. "From Determinism to Uncertainty: Social Storage and the Rise of the Minoan Palace." In *Economic Archaeology*, ed. Andrew Sheridan and Geoff Bailey, 187–213. *BAR-IS* 96. Oxford: British Archaeological Reports.
- . 1999. "Neighbours from Hell? The Household in Neolithic Greece." In *Neolithic Society in Greece*, ed. Paul Halstead, 77–95. Sheffield Studies of Aegean Archaeology 2. Sheffield: Sheffield Academic Press.
- . 2008. "Between a Rock and a Hard Place: Coping with Marginal Colonization in the Later Neolithic and Early Bronze Age of Crete and the Aegean." In *Escaping the Labyrinth*, 232–60.
- Hamilakis, Yannis. 1998. "Eating the Dead: Mortuary Feasting and the Politics of Memory in Aegean Bronze Age Societies." In *Cemetery and Society*, 115–32.
- Hayden, Barbara, Jenny Moody, and Oliver Rackham. 1992. "The Vrokastro Survey Project, 1986–1989: Research Design and Preliminary Results." *Hesperia* 61: 293–353.
- Hood, Sinclair. 1990. "Autochthons or Settlers? Evidence for Immigration at the Beginning of the Early Bronze Age in Crete." In *Pepragmena tou ST' Diethnous Kritologikou Synedriou A1*, 367–75. Heraklion: Etairia Kritikou Istorikon Meleton.
- Isaakidou, Valasia. 2008. "The Fauna and Economy of Neolithic Knossos' Revisited." In *Escaping the Labyrinth*, 90–114.
- Karantzali, Efi. 1996. *Le Bronze Ancien dans les Cyclades et en Crète: Les Relations Entre les Deux Régions—Influence de la Grèce Continentale*. *BAR-IS* 631. Oxford: Archaeopress.
- Knappett, Carl J. 1999. "Tradition and Innovation in Pottery-forming Technology: Wheel-throwing at Middle Minoan Knossos." *BSA* 94: 101–29.
- Krzyszowska, Olga. 2005. *Aegean Seals: An Introduction*. Bulletin of the Institute of Classical Studies Suppl. 85. London: Institute of Classical Studies, School of Advanced Study, University of London.
- Macdonald, Colin F., and Carl J. Knappett. 2007. *Knossos: Protopalatial Deposits in Early Magazine A and the South-West Houses*. BSA Supplementary Volume 41. London: British School at Athens.
- MacGillivray, J. Alexander. 1994. "The Early History of the Palace at Knossos (MM I–II)." In *Labyrinth of History*, 45–55.
- Manning, Sturt. 1994. "The Emergence of Divergence: Development and Decline on Bronze Age Crete and the Cyclades." In *Development and Decline in the Mediterranean Bronze Age*, ed. Clay Mathers and Simon Stoddart, 221–70. Sheffield: Sheffield University Press.
- Momigliano, Nicoletta. 2007. "Late Prepalatial (EM III–MM IA): South Front House Foundation Trench, Upper East Well and House C/Royal Road South Fill Groups." In *Knossos Pottery Handbook*, 79–103.
- , and David E. Wilson. 1996. "Knossos 1993: Excavations outside the South Front of the Palace." *BSA* 91: 1–57.
- Muhly, James. 2002. "Early metallurgy in Greece and Cyprus." In *Der Anschnitt. Zeitschrift für Kunst und Kultur im Bergbau* 15: 77–82.
- Nakou, Georgia. 1995. "The Cutting Edge: A New Look at Early Aegean Metallurgy." *JMA* 8(2): 1–32.
- . 2007. "Absent Presences: Metal Vessels in the Aegean at the End of the Third Millennium BC." In *Metallurgy in the Early Bronze Age Aegean*, ed. Peter M. Day and Roger C. P. Doonan, 224–44. Sheffield Studies in Aegean Archaeology 7. Oxford: Oxbow.
- Nowicki, Krzysztof. 2002. "The End of the Neolithic in Crete." *Aegean Archaeology* 6: 7–72.
- Olivier, Jean-Pierre. 1989. "Les écritures crétoises." In *Les civilisations egeennes du néolithique et de l'âge du bronze*, ed. René Treuil, Pascal Darcque, Jean-Claude Poursat, and Gilles Touchais, 237–52. Paris: Presses Universitaires de France.
- . 1996. "Les écritures crétoises: Sept points à considérer." In *Atti e memorie del secondo Congresso internazionale di micenologia, Roma-Napoli, 14–20 ottobre 1991. Incunabula Graeca 98:1*, ed. Ernesto De Miro, Louis Godart, and Anna Sacconi, 101–13. Rome: Gruppo editoriale internazionale.
- Papadatos, Yannis. 2005. *Tholos Tomb Gamma: A Prepalatial Tholos Tomb at Phourni, Archanes*. Philadelphia: INSTAP Press.
- . 2007. "The Beginning of Metallurgy in Crete: New Evidence from the FN–EM I Settlement at Kephala Petras, Siteia." In *Metallurgy in the Early Bronze Age Aegean*, ed. Peter M. Day and Roger C. P. Doonan, 154–67. Sheffield Studies in Aegean Archaeology 7. Oxford: Oxbow.
- . 2008. "The Neolithic–Early Bronze Age Transition in Crete: New Evidence from the Settlement at Petras Kephala, Siteia." In *Escaping the Labyrinth*, 258–72.

- , Peter Tomkins, Eleni Nodarou, and Yiannis Iliopoulos. In press. "The Beginning of Early Bronze Age in Crete: Continuities and Discontinuities in the Ceramic Assemblage at Kephala Petras, Siteia." In *The Aegean Early Bronze Age: New Evidence*, ed. Christos Doumas, Colin Renfrew, and Ourania Koukou. Athens, April 11–14, 2008.
- Pelon, Olivier. 1992. *Guide de Malia: Le palais et la nécropole de Chrysolakkos*. Paris: Ecole française d'Athènes.
- Pini, Ingo. 1990. "The Hieroglyphic Deposit and the Temple Repositories Deposit at Knossos." In *Aegean Seals*, 33–60.
- Postgate, Nicolas, Tao Wang, and Toby Wilkinson. 1995. "The Evidence for Early Writing: Utilitarian or Ceremonial?" *Antiquity* 69: 459–80.
- Renfrew, Colin. 1964. "Crete and the Cyclades before Rhadamanthus." In *Kritika Chronika* 18: 107–41.
- . 1972. *The Emergence of Civilization*. London: Methuen.
- Schoep, Ilse. 1999. "The Origins of Writing and Administration on Crete." *OJA* 18: 265–75.
- . 2002. "Social and Political Organisation on Crete in the Proto-palatial Period: The Case of Middle Minoan II Malia." *JMA* 15: 101–32.
- . 2004. "The Socio-economic Context of Seal Use and Administration at Knossos." In *Knossos*, 283–329.
- . 2006. "Looking beyond the First Palaces: Elites and the Agency of Power in EM III–MM II Crete." *AJA* 110: 37–64.
- . In press a. "Bridging the Gap between Early and Middle Minoan." In *Back to the Beginning*.
- . In press b. "Making Elites: Political Economy and Elite Culture(s) in Middle Minoan Crete." In *Political Economies of the Aegean Bronze Age*, ed. Daniel Pullen.
- , and Alvaro Allegrette. 1999. "Quatre tessons incisés provenant des sondages au sud-est de la crypte hypostyle à Malia." *Kadmos* 38: 109–13.
- Schoep, Ilse, and Carl J. Knappett. 2003. "Le Quartier Nu (Malia, Crète): L'occupation du Minoen moyen II." *BCH* 117(1): 49–86.
- . 2004. "Dual Emergence: Evolving Heterarchy, Exploding Hierarchy." In *Emergence of Civilization Revisited*, 21–37.
- Sherratt, Andrew, and Susan E. Sherratt. 1991. "From Luxuries to Commodities: The Nature of Mediterranean Bronze Age Trading Systems." In *Bronze Age Trade*, 351–86.
- Soles, Jeffrey S. 1988. "Social Ranking in Prepalatial Cemeteries." In *Problems in Greek Prehistory*, 49–61.
- . 1992. *The Prepalatial Cemeteries at Mochlos and Gournia and the House Tombs of Bronze Age Crete*. Hesperia Suppl. 24. Princeton: Princeton University Press.
- Todoaro, Simona. 2005. "EM I–MMA Ceramic Groups at Phaistos: Towards the Definition of a Prepalatial Ceramic Sequence in South Central Crete." *Creta Antica* 6: 11–46.
- . In press. "Craft Production and Social Practices at Prepalatial Phaistos: The Background to the First 'Palace.'" In *Back to the Beginning*.
- , and Serena Di Tonto. 2008. "The Neolithic Settlement at Phaistos Revisited: Evidence for Ceremonial Activity on the Eve of the Bronze Age." In *Escaping the Labyrinth*, 177–90.
- Tomkins, Peter. 2004. "Filling in the 'Neolithic Background': Social Life and Social Transformation in the Aegean before the Bronze Age." In *Emergence of Civilization Revisited*, 38–63.
- . 2007a. "Communality and Competition: The Social Life of Food and Containers at Aceramic and Early Neolithic Knossos, Crete." In *Cooking Up the Past: Food and Culinary Practices in the Neolithic and Bronze Age Aegean*, ed. Christopher Mee and Josette Renard, 174–99. Oxford: Oxbow.
- . 2007b. "Neolithic: Strata IX–VIII, VII–VIB, VIA–V, IV, IIIB, IIIA, IIB, IIA, and IC Groups." In *Knossos Pottery Handbook*, 9–48.
- . 2008. "Time, Space, and the Reinvention of the Cretan Neolithic." In *Escaping the Labyrinth*, 21–48.
- . In press a. "Landscapes of Identity, Ritual, and Memory: Reconsidering the Use of Caves on Crete during the Neolithic and Early Bronze Age." In *Journeys into the Dark Zone*, ed. Holley Moyes. Colorado: University Press of Colorado.
- . In press b. "Behind the Horizon: The Genesis of the 'First Palace' at Knossos (Final Neolithic IV–Middle Minoan IB)." In *Back to the Beginning*.
- , and Peter M. Day. 2001. "Production and Exchange of the Earliest Ceramic Vessels in the Aegean: A View from Knossos." *Antiquity* 75: 259–60.
- , Peter M. Day and Vasilis Kilikoglou. 2004. "Knossos and the Early Neolithic Landscape of the Herakleion Basin." In *Knossos*, 51–59.
- Triantaphyllou, Sevi. 2008. "Living with the Dead: A Re-Consideration of Mortuary Practices in the Greek Neolithic." In *Escaping the Labyrinth*, 136–54.
- Vlasaki, Maria, and Erik Hallager. 1995. "Evidence for Seal Use in Pre-palatial Western Crete." In *Seaux minoens et mycéniens*, ed. Walter Müller, 251–70. CMS Beiheft 5. Berlin: Mann.
- Vagnetti, Lucia. 1996. "The Final Neolithic: Crete Enters the Wider World." *Cretan Studies* 5: 29–39.
- , and Paolo Belli. 1978. "Characters and Problems of the Final Neolithic in Crete." *SMEA* 19: 125–63.
- Van Buren, Mary, and Janet Richards. 2000. "Introduction: Ideology, Wealth, and the Comparative Study of Civilizations." In *Order, Legitimacy, and Wealth in Ancient States*, ed. Janet Richards and Mary Van Buren, 3–12. New York: Cambridge University Press.
- Warren, Peter. 1965. "The First Minoan Stone Vases and Early Minoan Chronology." *Kritika Chronika* 19: 7–43.
- . 1973. "Crete, 3000–1400 B.C.: Immigration and the Archaeological Evidence." In *Bronze Age Migrations in the Aegean: Archaeological and Linguistic Problems in Greek Prehistory*, ed. R. A. Crossland and Ann Birchall, 41–47. Park Ridge, N.J.: Noyes.
- . 1984. "Early Minoan–Early Cycladic Chronological Correlations." In *Prehistoric Cyclades*, 55–62.
- . 1987. "The Genesis of the Minoan Palace." In *Function of the Minoan Palaces*, 39–42.
- . 2004. "Part II: The Contents of the Tombs." In *The Early Minoan Tombs of Lebena, Southern Crete*, ed. Stelios Alexiou and Peter Warren, 23–218. SIMA XXX. Sävedalen, Sweden: Åström.
- Watrous, L. Vance. 1987. "The Role of the Near East in the Rise of the Cretan Palaces." In *Function of the Minoan Palaces*, 65–70.
- . 2001. "Crete from the Earliest Prehistory through the Protopalatial Period." In *Aegean Prehistory*, 157–223.
- , Despoina Xatzi-Vallianou, Kevin Pope, Nikos Mourtzas, Jennifer Shay, C. Thomas Shay, John Bennet, et al. 1993. "A Survey of the Western Mesara Plain in Crete: Preliminary Report on the 1984, 1986, and 1987 Field Seasons." *Hesperia* 62: 191–248.
- Weingarten, Judith. 1990. "Three Upheavals in Minoan Sealing Administration: Evidence for Radical Change." In *Aegean Seals*, 105–14.

- . 1994. "Sealings and Sealed Documents at Bronze Age Knossos." In *Labyrinth of History*, 171–88.
- . 2000. "Lerna: Sealings in a Landscape." In *Administrative Documents in the Aegean and Their Near Eastern Counterparts*, ed. Massimo Perna, 103–24. Turin: Paravia Scriptorium.
- Whitelaw, Todd. 1983. "The Settlement at Fournou-Korifi, Myrtos and Aspects of Early Minoan Social Organisation." In *Minoan Society*, 323–45.
- Whitelaw, Todd. 2004. "Alternative Pathways to Complexity in the Southern Aegean." In *The Emergence of Civilization Revisited*, 232–56.
- , Peter M. Day, Evangelia Kiriati, Vasilis Kilikoglou, and David E. Wilson. 1997. "Ceramic Traditions at EM IIB Myrtos, Fournou Korifi." In *TEXNH*, 265–74.
- Wilson, David E. 1994. "Knossos before the Palaces: an Overview of the Early Bronze Age (EM I-EM III)." In *Knossos: A Labyrinth of History*. Papers Presented in Honour of Sinclair Hood, ed. Don Evelyn, Helen Hughes-Brock and Nicoletta Momigliano, 23–44. London: British School at Athens.
- . 2007. "Early Prepalatial (EM I-EM II): EM I Well, West Court House, North-East Magazines, and South Front Groups." In *Knossos Pottery Handbook*, 49–77.
- . 2008. "Early Prepalatial Crete." In *The Cambridge Companion to the Aegean Bronze Age*, ed. Cynthia W. Shelmerdine, 77–104. New York: Cambridge University Press.
- , and Peter M. Day. 1994. "Ceramic Regionalism in Prepalatial Central Crete: The Mesara Imports from EM IB to EM IIA Knossos." *BSA* 89: 1–87.
- . 2000. "EM I Chronology and Social Practice: Pottery from the Early Palace Tests at Knossos." *BSA* 95: 21–63.
- . 2004. "The Pottery from Early Minoan I-IIB Knossos." In *Knossos*, 67–74.
- Wright, James C. 2004. "The Emergence of Leadership and the Rise of Civilization in the Aegean." In *Emergence of Civilization Revisited*, 64–89.

CHAPTER 6

CYCLADES

COLIN RENFREW

THE Cycladic Islands, lying in the southern Aegean in a group almost equidistant from the Greek and Anatolian coasts and from Crete, have played a central role in the prehistory of the Aegean. Even in the late Upper Palaeolithic period, before there is evidence of permanent settlement in the islands, the volcanic glass known as obsidian—and very suitable as a raw material for chipped stone tools—was being brought from its principal Aegean source on the island of Melos to Franchthi Cave in the Argolid (Renfrew and Aspinall 1990). From the Neolithic period onward, interactions between the Cycladic Islands and neighboring lands were frequent. And, of course, the Cyclades were significant in the Archaic period of Greek civilization, when islands such as Naxos, Paros, Siphnos, and Melos played a prominent role until the period of Athenian domination.

In the Early Bronze Age, the inhabitants of the Cyclades took an active part in the trade and commerce of the time. Cycladic sources of lead and copper were economically significant. The influence of the Early Cycladic cultures was felt in settlements, and notably in cemeteries, in northern Crete and in Attica and Euboea. The characteristic marble sculptures or figurines, usually no more than thirty centimeters high but sometimes reaching almost life-sized, are among the most characteristic Cycladic products and much prized by collectors today. Their influence upon the burial customs in neighboring areas is evident.

The Early Bronze Age cultures of the Cyclades first came to scholarly attention during the nineteenth century, when the Early Cycladic cemeteries became known to travelers and collectors (e.g., Bent 1884). They were first systematically investigated in the pioneering excavations of Christos Tsountas (1898, 1899), whose careful account has become the basis for later studies (Papathanassopoulos 1962; Dourmas 1977; Rambach 2000a, 2000b). At about the same time, the first Cycladic settlement was excavated at Phylakopi in Melos, under the day-to-day supervision of Duncan Mackenzie, who went on to play a key role in the excavations conducted by Sir Arthur Evans at Knossos in

- Wright, James C. 2001. "Factions and the Origins of Leadership and Identity in Mycenaean Society." *BICS* 45: 182.
- . 2004a. "Comparative Settlement Patterns during the Bronze Age in the Northeastern Peloponnesos, Greece." In *Side-by-Side Survey: Comparative Regional Studies in the Mediterranean World*, ed. Susan E. Alcock and John F. Cherry, 114–31. Oxford: Oxbow.
- . 2004b. "The Emergence of Leadership and the Rise of Civilization in the Aegean." In *Emergence of Civilisation Revisited*, 64–89.
- Zangger, Eberhard. 1992. "NL to Present Soil Erosion in Greece." In *Past and Present Soil Erosion: Archaeological and Geographical Perspectives*, ed. John Boardman and Martin Bell, 133–47. Oxbow Monograph 22. Oxford: Oxbow.
- Zavadil, Michaela. In press. "The Peloponnese in the Middle Bronze Age: An Overview." In *Mesohelladika*.
- Zerner, Carol W. 1979. "The Beginning of the Middle Helladic Period at Lerna." PhD diss., University of Cincinnati.
- . 1993. "New Perspectives on Trade in the Middle and Early Late Helladic Periods on the Mainland." In *Wace and Blegen*, 39–56.

CHAPTER 8

CRETE

ILSE SCHOEP

THE emergence of the 'First' or 'Old' Palaces is generally considered to be the main event of the Middle Bronze Age on Crete. These 'palaces' are widely believed to have emerged in MM IB or around 1925/1900 BC (Cherry 1986) in several places on Crete (Knossos, Malia, Phaistos, Petras). In the last couple of years it has become clear, however, that some of these structures have a much older biography and in fact go back to the Early Minoan period (see Tomkins and Schoep this volume; Schoep, Tomkins, and Driessen forthcoming) since some of their key features (e.g., orientation, presence of major courts and of architectural wings) are attested as early as EM IIB.

The designation 'palace' and its interpretation as the residence of a king, as with many of our ideas about Minoan society, go back to Arthur Evans (Evans 1921). Struck by the absence of the sort of temples that were already known from Egypt and the Near East and influenced by perceived resemblances to Anatolian theocracies, Evans interpreted the large court building he excavated at Knossos as the residence of a dynasty of priest-kings who stood at the head of a hierarchical power structure (Evans 1921, 26). It has been convincingly demonstrated that the discovery of a 'palace' at Knossos corresponded to Evans's expectations, which were determined by his sociopolitical and cultural background (MacGillivray 2000). From our perspective, it is surprising that the *presence* of such large structures did not evoke more surprise, given that there is no such development anywhere else in the Aegean and even the wider Mediterranean at that time.

After the decipherment of Linear B in 1952, the economic role of the Minoan palace became more emphasized, and the 'palace' became the center of a redistributive economy analogous to the redistributive temple economy in the Near East. The Linear B tablets were assumed to "reveal a massive redistributive operation, in which all personnel and all activities, all movements of both persons and goods, so to speak,

were administratively fixed" (Finley 1957, 135). Heavily influenced by neo-evolutionism (Hamilakis 2002), Renfrew further developed the Minoan 'palace' as a regional redistributive center that was linked to an agricultural hinterland, also for the Middle Bronze Age (Renfrew 1972, 51, 307): "The palace [from its emergence] is both the redistributive centre for the economic activities of a region, and the residence of a prince, the leading personage of a society now stratified" (Renfrew 1972, 51).

However, although the economic transactions recorded in the Knossian Linear B tablets illustrate that in its latest phase (LM II–III) the palace at Knossos was an important economic hub, it is premature to project this model onto earlier phases (MM I–II, as well as MM III–LM I) of the palace and to other 'palaces' on Crete. In addition, the redistributive model as suggested by Renfrew (1972) has been extensively critiqued (Halstead 1988, 2004; Hamilakis 1996).

An important contribution was made by Cherry, who argued that the 'palaces' as residences of a political, religious, and economic authority are indicative of a state-level society (Cherry 1984, 1986). At the same time, the emergence of these buildings signals an important change in the organizational base of society, which is now hierarchically organized: "The twentieth century BC saw the appearance, in several regions of Crete, of complex monumental building (i.e., palaces) of closely similar form, the material embodiment of radically new institutional features and major changes in the organizational basis of Minoan society" (Cherry 1986, 27). However, considering the long biography of the 'palaces' of Malia, Knossos, and Phaistos, the question of whether the MM IB phase indeed constitutes a drastic change in the organizational basis of society needs to be carefully reconsidered (Schoep and Tomkins this volume; Schoep forthcoming).

The idea that 'palaces' were the residence of a political, religious, and economic authority has found wide acceptance (Renfrew 1972; Cherry 1986; Halstead 1988; Branigan 1988; Watrous 1987; Dickinson 1994; Hood 1995). Recently, however, as more emphasis is being placed on the historiography of the palace model, this interpretation has increasingly been questioned (Bintliff 1984; Farnoux 1995; Hamilakis 2002; Driessen 2002; Schoep 2002a, 2002b). One of the first areas to have come under fire is the presumed economic function of these structures. The function of the kouloures as large-scale receptacles for grain has been criticized (Strasser 1997). In addition, the notion that palaces were the main producers of high-quality items or elite culture in Minoan society has been called into question. There is no evidence that the production of Kamares ware, traditionally attributed to palatial workshops (cf. Cherry 1986, 37–38), was taking place under palatial control. Petrographic analysis of Kamares ware from Knossos has shown that a significant proportion of this high-quality pottery was produced not locally but somewhere in south-central Crete (Day and Wilson 1998, 352, 358). The First 'Palace' at Knossos emerges as less of an active producer of fine pottery than as a consumer. It may be doubted that the entire Minoan economy functioned through redistribution or that the Minoan palaces controlled all agricultural production and commercial activity since this is not even true of the temple economy in the Near East, on which this model was based (Postgate 1995; Cherry 1999). As Postgate (1992, 109) notes: "We cannot any longer

maintain that because the temple collected commodities and distributed them to its dependants the entire economy operated through 'redistribution,' or that the priests controlled all agricultural production and commercial activity." However, one must be careful not to completely discard the idea that the 'palaces' had an economic aspect, as some production was clearly taking place in these buildings (Branigan 1987, 1988, and see later discussion). There is, however, no reason to assume that the latter in any way controlled the production of high-quality (or other) items in Middle Bronze Age society or that the presence or absence of production activities can be used as an argument for the interpretation of these buildings as 'palaces.'

DEFINING THE 'PALACE'

Although the large central buildings that have been excavated at Knossos, Malia, Phaistos, and Petras are identified as 'palaces,' the monumental buildings at Kommos (Shaw 2002), Monastiraki (Kanta and Tzigounaki 2000), and perhaps also Archanes (Sakellarakis and Sapouna-Sakellarakis 1997) are not. The definition of the Minoan palace is mainly based on the physical appearances of the Late Bronze Age buildings and often combines both objective (architectural) and subjective (interpretative) criteria: "Each palace included a central court; generally there were other courts as well. Around the central court were grouped storage facilities, production areas, archives of inscribed tablets, rooms for ritual activity and rooms for state functions" (Warren 1985, 94). Watrous's (1987, 204) definition of a palace as the residence of a powerful authority that controls a system of redistribution assisted by a literate bureaucracy is even more subjective. The discovery in recent years of high-profile buildings with courts at Petras (Tsipopoulou 2002), Kommos (Shaw 2002), Archanes (Sakellarakis and Sapouna-Sakellarakis 1997), and Monastiraki that do not resemble the canonical palace form has posed additional challenges to the traditional definition. Such confusion arises in part from both a desire to establish islandwide homogeneities, patterns, and typologies and a reluctance to acknowledge the apparent variation and regionalism that existed within the island throughout the Bronze Age. The traditional definitions of 'palace' were created on the basis of a single palace (i.e., Knossos) and a single phase (i.e., the latest and best-preserved phase), and any variation in time, form, and scale were not taken into account, thereby generating confusion as to whether some buildings should be identified as palaces or not. Considering that each palace plays a very specific role in a community, it seems logical that their size, embellishment, and specific layout should be determined in relation to the changing size, affluence, and organization of the community it served. Indeed, a comparison of the actual remains of the Middle Bronze Age court palaces reveals a number of differences in size, arrangement, number of courts, and architectural elaboration and layout of the architecture bordering the courts (Schoep 2004). In addition, too little attention is paid to the social practices

taking place in these buildings, although it is exactly these that are likely to inform us about the role of these buildings (Day and Relaki 2002).

A key part of the critical reassessment of the Minoan palace in the last couple of years is the acknowledgement that the term 'palace' carries with it a host of perhaps unhelpful baggage, which consciously or unconsciously encourages interpretation of the palace as the residence of a royal elite who occupies a supreme position within a hierarchical social and political structure (Schoep 2002a). Therefore, scholars have suggested alternative designations such as court-centered buildings, court buildings, and court compounds (Driessen 2002; Schoep 2002a, 2002b). The obvious advantage of the use of these terms is that they describe the buildings without imposing ideas about the ways in which they functioned; an alternative term such as 'court building' more accurately reflects our lack of knowledge of the identity and nature of these buildings and is therefore here preferred.

THE ORGANIZATION OF SOCIETY IN THE MIDDLE BRONZE AGE: FROM A PALACE-CENTERED TO AN ELITE-CENTERED MODEL?

In the traditional palatial model, the court building is considered to be the physical embodiment of a complex state structure or a state and the residence of a political, religious, and economic authority (Cherry 1984, 1986). This interpretation has encouraged a top-down view, with all of the activities taking place outside the palaces viewed from a palatial perspective. As such, workshops outside the palaces or palatial centers producing high-quality and labor-intensive prestige goods, monumental structures, and the presence of administration are generally considered to be 'palatial,' implying a certain dependency upon the court building that cannot in fact be empirically justified.

This bias toward the Minoan palace in theorizing about Minoan society is reminiscent of the way that, in the Near East until the 1950s, the temple was thought to be the state (Postgate 1995, 109). This extreme view has now been revised, and it is clear that in the Near East the temple was counterpoised by the palace, and these respective authorities exercised their power from two geographically different locations. Despite being associated with different sources of power in society, both the palace and the temple were run along similar lines, and they might have had property in more than one place and engaged in a variety of productive and commercial activities (Postgate 1995, 109). At the same time, although part of the economy was based on redistribution (i.e., to feed dependent personnel), this does not imply that the whole economy functioned in this manner.

This brief comparison leads to two important observations. First, it is not because some of the activities that took place in the court buildings involved storage,

production, and perhaps the collection and distribution of commodities that they can be identified as the residences of a king, who also controlled the religious and the economic sectors. Second, the attestation of these activities in the court buildings does not imply that, in the Middle Bronze Age, these buildings controlled the whole economy to the exclusion of other parties. Third, the traditional Minoan palatial model of society is unusual because in none of the contemporary societies in the East Mediterranean were the political and the religious authorities housed under a single roof, not even in theocratic societies such as Egypt and the Hittites (Macqueen 1986). This raises the question of whether we should continue to view the court buildings as housing these different aspects under a single roof.

THE COURT BUILDINGS IN CONTEXT

One of the best ways to shed light on the function of the court buildings in Minoan society and on their relationship to other parties and agents in society is to explore the practices that took place in these structures (Day and Relaki 2002). It will become clear in the following section that some of the practices attested in them, such as administration and production and consumption of high-value goods, are not exclusive to them but are also confirmed in other high-profile buildings belonging to affluent households (e.g., Quartier Mu at Malia) (Schoep 2002a). From this it follows that the court buildings in themselves cannot be used as "the basis for a reconstruction of the entire Minoan society" as is sometimes thought (Warren 1985, 94).

PRODUCTION

The Minoan palaces have attracted so much attention and been invested with so much power because "in them were concentrated the kind of high-quality artifacts that delight the discoverer and encapsulate the culture," as was the case for the temples in the Near East (Postgate 1995, 109). However, the presence of such objects need not imply that the palaces were the only producers of high culture since such artifacts occur in a range of ritual contexts such as tombs and rural shrines, as well as large residential/ceremonial complexes outside the court buildings, for example, Quartier Mu at Malia. Similarly, in the Near East, such activities evidently took place in the palace, in the temple, and in wealthy households (Postgate 1995).

The evidence for actual on-the-spot production in the court buildings is limited (see also Branigan 1988, 64). At Phaistos, polishers, spatulas, and debris were found in rooms LI-LV and LXII, in association with some twenty stone vases and a number of administrative documents (Branigan 1988, 64). The main evi-

dence for production consists of loomweights, pointing toward the production of textiles (Militello 2006, 176). Concentrations of loomweights are not exclusive to court buildings, and considerable numbers of loomweights have been found in Quartier Mu in Malia. The palatial production may have been intended for consumption within the confines of this building or for activities taking place on these premises.

The Loomweight Basement at Knossos yielded more than four hundred loomweights, but the date of this deposit is contested, whether MM IIB (MacGillivray 1998, 41; Macdonald 2005, 66–69) or MM IIIA (Warren and Hankey 1989, 52–53). Interestingly, there are possible indications of the procurement of the raw material needed for the production of textiles: a number of Cretan Hieroglyphic bars containing large even numbers but no logogram. Since these large numbers are unlikely to record people, they may be indicating flocks of sheep (Olivier 1994–1995; Schoep 2001a). It suggests that at the time of the Cretan Hieroglyphic documents (whether MM IIB or MM IIIA; see Schoep 2001b) the court building at Knossos was managing an estate that produced wool (Schoep 2004, 287–88). The attestation of logograms denoting cereals, figs, olives, and other unidentified commodities on further tablets suggests that these commodities also formed part of the transactions recorded on other bars.

Besides the possible production of textiles, there is no evidence that the high-value objects such as found stored or deposited in the Vat Room deposit and the Loomweight Basement at Knossos (mentioned earlier) were produced on the premises, with the exception of the obsidian, but the knapping of these has been connected with transformative processes as ritual action (Carter 2004, 273). One of the sealings sealed the string binding of a document or some other item (Macdonald 2005, 52), which could have accompanied any of these objects or the raw material out of which they were made.

STORAGE AND CONSUMPTION

Another aspect that has been closely connected with the identification of the court buildings as palaces is the presence of elaborate storerooms (cf. Renfrew 1972). Besides the storage of agricultural commodities, the large-scale storage of tableware is evidenced. At Knossos, the MM IIA Royal Pottery Stores contain piled-up stacks of very plain drinking wares (saucers, conical cups, and teacups) (MacGillivray 1998, 155–58, Group G) and some of the finest pottery found at Knossos (especially in southwest room; MacGillivray 1998, 36, Group F). The quantity of MM IIA cups and goblets exceeds the number of vases used for the storage of liquids, suggesting an assemblage primarily for the serving of food and drink on a large scale.

Quantities of tableware were found elsewhere in the court building at Knossos. Recent work in Early Magazine A has revealed a deposit that reflects an interesting hierarchy of drinking vessels; the majority of shapes are crudely made, footed goblets and straight-sided cups, and at the top of the hierarchy is an astonishing eggshell cup (Macdonald and Knappett 2007). The MM IB Vat Room deposit from a plaster-lined pit contained mainly drinking and pouring vessels, obsidian cores, blades and flakes, fragments of objects in ivory, ostrich shell, rock crystal, and two sealings (Panagiotaki 1999; MacGillivray 1998; Macdonald 2005, 50–51).

It is remarkable that a proportion of the Kamares pottery consumed at Knossos was derived from a workshop in the Mesara, which also supplied the court building at Phaistos (Day and Wilson 1998). In MM I, a considerable part of the fine pottery was imported from Pediada (Rethemniotakis and Christakis 2004). The pottery from the MM I–II court building in Malia has not been published in detail, but if the pottery from Quartier Mu (Poursat and Knappett 2005) is anything to go by, the court building was probably consuming pottery from different local and nonlocal workshops. It would thus seem that the court buildings were consumers of tableware that was produced elsewhere.

At Phaistos, high-quality Kamares tableware was stored in large quantities in the south part of the west wing, said to contain more than 25% of all pottery (Branigan 1988). There is a clear connection between these stores of tableware and the presence of large open spaces, where the consumption presumably took place. In addition, room LVIII contains pithoi from which foodstuffs and/or liquids could have been dispensed. This large-scale storage of tableware, destined to be used for communal consumption, contrasts with the pattern attested in the north sector of the west wing, where the rooms contained small deposits of vases, again mainly drinking and pouring shapes (see Pernier 1935). Since these were concerned with small-scale dispensation of liquids (due to the restricted number of drinking vessels), it is clear that consumption in these contexts was neither communal nor aimed at a large public. In the north wing, the storage of agricultural goods is attested in magazine XXXIV, which was equipped with thirty-one pithoi and located near an open space (i.e., a later central court).

Besides the large-scale storage of tableware, there is also evidence in the court building for the storage of high-status and labor-intensive objects such as several bronze swords, a schist leopard ax, and a dagger have been found (Pelon 1992). There is no evidence, however, that these were produced in the court building. The acrobat's sword forms part of a group of Egyptianizing metal objects, including a dagger from Quartier Mu and the gold bees from Chrysolakkos, which were presumably produced locally (Poursat 2000, 29–30). At Phaistos, some of the rooms were equipped with stone vases and occasionally bronze objects and on one occasion an ivory knife heft and gold sheet fragments (Pernier 1935), but in general the absence of metals and high-status goods is striking (Carinci 2000, 33). Similarly, high-value items were found in the Vat Room Deposit at Knossos and the same could be argued for the objects from the Loomweight Basement (terracotta models, Town Mosaic, etc.) (Macdonald 2005, 67–68).

WRITING AND SEALING

Writing and sealing practices are traditionally closely connected with the interpretation of the court buildings as palaces, and the presence of Linear A and Cretan hieroglyphic documents is usually interpreted as evidence not only for the economic role of the palace (cf. Renfrew 1972; Weingarten 1990) but also for the existence of an administrative authority (Weingarten 1990). The origins of sealing and writing are traditionally associated with the assumed MM IB emergence of the palaces and their economic needs (Weingarten 1990, 1994; Treuil et al. 2007; Krzyszkowska 2005, 79). However, both writing as well as seal use are already attested in the late Early Minoan period (Schoep 2006), although it seems that a significant increase and an increased sophistication in their deployment occurred in the Middle Bronze Age. A more complex typology of sealed documents appears besides the already existing, direct object sealings and *noduli* involving crescents, roundels, and hanging nodules (Schoep 1999; Krzyszkowska 2005, 99–104).

Written documents usually occur together with sealed documents, although the ratio of one to the other varies considerably among deposits. Major MM II collections of written and sealed documents have been found in the court buildings of Phaistos (Militello 2000) and Petras (Tsipopoulou and Hallager 1996, 1997). The ‘archives’ from Knossos and Malia probably postdate MM II and are more likely to be MM III in date (Schoep 2001b, 2004; Krzyszkowska 2005, 111, 114). However, the use of sealings and script is also attested in high-profile buildings outside the settlement. The most extensive archive to date comes from Quartier Mu at Malia, where Cretan hieroglyphic bars were used in conjunction with an array of sealed documents (Olivier and Godart 1996). Cretan hieroglyphic bars were also used in a building complex discovered to the southwest of Quartier Mu during the Malia survey, and inscriptions on pottery suggest that some of the pottery workshops were also deploying writing; at Malia, besides the court building there is evidence of administration in at least two locations (Schoep 2002a; Müller and Olivier 1991). At Knossos, a nodule and a fragment of an inscribed tablet were found in conjunction with production debris (Macdonald and Knappett 2007, 131–37).

PLACING THE PRACTICES IN THE COURT BUILDINGS IN A WIDER FRAMEWORK

It is important to view the Minoan court buildings within a wider spatial context—hence the emphasis in the 1980s and 1990s on surveys (Driessen 2001)—but also with regard to the practices attested in these buildings and the way they

relate to similar practices outside them. As noted earlier, it is not because they were engaging in activities of production, collection and storage, consumption, and even distribution that they controlled all of the production, collection, and distribution in Minoan society. A comparison of the production, exchange, and consumption strategies of affluent households and the court buildings allows us to chart similarities and differences in production, exchange, and consumption strategies and to assess the role of the latter in the community. The best example of a context of an affluent household in the Middle Bronze Age is Quartier Mu at Malia, which consists of two main buildings (A and B) and a number of workshops around them (see Poursat 1996; Schoep 2002a, forthcoming b). That the elite of Quartier Mu was overseeing production is suggested by the location of the workshops around them (Poursat 1996). Some (but not all) of the goods produced in the workshops were also consumed and/or stored in the main buildings (A, B, and D). However, not all of the goods that were stored and consumed in buildings A, B, and D were produced in the workshops, and almost all of the pottery was obtained from other local and nonlocal workshops. Other houses in Malia seem to have been consuming the same pottery (Schoep and Knappett 2003). However, the terracotta Egyptianizing appliqué elements and presumably the exotic knowledge they imply are as yet exclusive to Quartier Mu (Poursat 1996).

Although the court building was considerably larger than the total area covered by Quartier Mu, the former did on present evidence not contain significantly more storage vases (liquids in East Wing, two pithoi in West Wing). There is less evidence for production in the court building than in Quartier Mu, as in fact few loom-weights have been found, and the evidence for craft activities is almost nonexistent (Schoep 2002a, 113). At least some of the polychrome pottery (from Quartier III) is local polychrome of the type that was also attested in Quartier Mu (‘marguerites’) (Pelon 1992, plate III:2) and was produced in a local workshop. Seal stones of the type that was produced in the Sealstone workshop of Quartier Mu were consumed in the court building (Pelon 1984, 885, figure 7) were also found in the court building (Pelon 1984, 885 fig. 7; Pelon 1992, 47, figure 24; 60, figure 37). Other unpublished finds from the MM I–II building include stone and faience objects, an ivory pendant in the shape of a lioness, and gold leaf fragments (Daux 1969, 1056). The two swords and the dagger are stunning objects, but there is no evidence for metalworking in the MM I–II building. Although a metal workshop was identified in Mu, the latter seems in the first place to have produced metal tools (Poursat 1996). There is no evidence that the high-quality metal dagger with inlays from Mu was produced in the Mu workshop. The swords from the Malia palace, the bees from Chrysolakkos, and the Mu dagger all share Egyptianizing features (Poursat 2000) and may perhaps be ascribed to a single (as yet unidentified) workshop. However, we cannot rule out the possibility that objects that were used in ritual practice inside the palace were also produced in these buildings, as is suggested by the obsidian cores from the Vat Room Deposit (Macdonald 2005, 50).

CONCLUSIONS

In this chapter I suggest that the palatial model in which complete power is concentrated in the 'palaces' should be revised because such a model is unrealistic on several levels. There is no empirical evidence to support the traditional interpretation of the 'palaces' as the residence of a single, centralized authority whose domain was the political, religious, and economic affairs of the community. Even though evidence that points toward production, storage, consumption, and recordkeeping is found in the court buildings, we cannot simply conclude that the latter controlled these activities in society. In fact, the excavation of Quartier Mu at Malia has shown conclusively that an affluent household such as that was engaged in activities similar to those carried out in the contemporary court building at Malia. From the evidence at hand, it seems that production in the court buildings pertains in the first place to textiles and not to the production of high-quality prestige goods, as is assumed all too often. Going on the evidence from the Quartier Mu workshops, a case can be made that affluent households in the settlement were actively involved in the production of high-profile elite objects, perhaps through attached specialists. Consumption of not only foodstuffs but also high-status objects is attested in both the court buildings and affluent households. A clear difference in scale is suggested by the large amounts of tableware in the court buildings and the size of the communal spaces. In contrast to the venues and the consumption in the affluent households, the court buildings were aimed at a much wider public than any happenings staged by the latter.

BIBLIOGRAPHY

- Bintliff, John. 1984. "Structuralism and Myth in Minoan Studies." *Antiquity* 58: 33–38.
- Branigan, Keith. 1987. "The Economic Roles of the First Palaces." In *Function of the Minoan Palaces*, 245–49.
- . 1988. "Some Observations on State Formation in Crete." In *Problems in Greek Prehistory*, 63–71.
- Carinci, Filippo M. 2000. "Western Messara and Egypt during the Protopalatial Period: A Minimalist View." In *Krete-Aigytos: Politismikoi desmoi trion chilikion. Meletes*, ed. Alexandra Karetsou, 31–37. Athens: Hypourgeoio Politismou.
- Carter, Tristan. 2004. "Transformative Processes in Liminal Space: Craft as Ritual Action in the Throne Room Area." In *Knossos*, 273–82.
- Cherry, John. 1984. "The Emergence of the State in the Prehistoric Aegean." *PCPS* 210, n.s., 30: 18–48.
- . 1986. "Politics and Palaces: Some Problems in Minoan State Formation." In *Peer Polity Interaction and Socio-political Change*, ed. Colin Renfrew and John Cherry, 19–45. New York: Cambridge University Press.
- . 1999. "Introductory Reflections on Economies and Scale in Prehistoric Crete." In *From Minoan Farmers to Roman Traders: Sidelights on the Economy of Ancient Crete*, ed. Angelos Chaniotis, 17–23. Stuttgart: Steiner.
- Daux, Georges. 1969. "Chronique des fouilles en Grèce." *BCH* 93: 1056.
- Day, Peter M., and David E. Wilson. 1998. "Consuming Power: Kamare Ware of Protopalatial Knossos." *Antiquity* 72: 350–58.
- Day, Peter M., and Maria Relaki. "Past Factions and Present Fictions: Palaces in the Study of Minoan Crete." In *Monuments of Minos*, 217–34.
- Dickinson, Oliver T. P. K. 1994. *The Aegean Bronze Age*. New York: Cambridge University Press.
- Driessen, Jan. 2001. "History and Hierarchy: Preliminary Observations on the Settlement Pattern of Minoan Crete." In *Urbanism*, 51–71.
- . 2002. "The King Must Die: Some Observations on the Use of Minoan Court Compounds." In *Monuments of Minos*, 1–13.
- Evans, Arthur. 1921. *PM*, vol. 1.
- Farnoux, Alexandre. 1995. "La fondation de la royauté minoenne: XXème siècle avant ou après Jésus-Christ?" In *Politeia*, 323–34.
- Finley, Moses I. 1957. "The Mycenaean Tablets and Economic History." *Economic History Review* 10: 128–41.
- Halstead, Paul. 1988. "On Redistribution and the Origins of Minoan-Mycenaean Palatial Economies." In *Problems in Greek Prehistory*, 519–30.
- . 2004. "Life after Mediterranean Polyculture: The Subsistence Subsystem and the Emergence of Civilisation Revisited." In *The Emergence of Civilisation Revisited*, 189–206.
- Hamilakis, Yannis. 1996. "Wine, Oil, and the Dialectics of Power in Bronze Age Crete: A Review of the Evidence." *OJA* 15: 1–32.
- . 2002. "What Future for the 'Minoan' Past? Rethinking Minoan Archaeology." In *Labyrinth Revisited: Rethinking 'Minoan' Archaeology*, ed. Yannis Hamilakis, 2–28. Oxford: Oxbow.
- Hitchcock, Louise A. 2000. *Minoan Architecture: A Contextual Analysis*. Jonsered, Sweden: Aström.
- Hood, Sinclair. 1995. "The Minoan Palaces as Residences of Gods and Men." In *Pepragmena tou Z' Diethnous Kretologikou Synedrio*, 393–407. Rethymnon, Crete: Historical Society of Crete.
- Kanta, Athanasia, and Anastasia Tzigounaki. 2000. "The Protopalatial Multiple Sealing System: New Evidence from Monastiraki." In *Proceedings of the International Conference of Sphragistic Studies (1996)*, ed. Massimo Perna, 193–210. Turin: Paravina Scriptorium.
- Knappett, Carl J. 1999. "Assessing a Polity in Proto-palatial Crete: The Malia-Lasithi State." *AJA* 103: 615–39.
- Krzyszowska, Olga. 2005. *Aegean Seals: An Introduction*. BICS Suppl. 85. London: Institute of Classical Studies.
- Macdonald, Colin F. 2005. *Knossos*. London: Folio Society.
- , and Carl J. Knappett. 2007. *Knossos: Protopalatial Deposits in Early Magazine A and the South-west Houses*. BSA Supplementary vol. 41. London: British School at Athens.
- MacGillivray, J. Alexander. 1994. "The Early History of the Palace at Knossos." In *Labyrinth of History*, 45–55.
- . 1998. *Pottery Groups of the Old Palace Period*. BSA Studies 5. Athens: British School at Athens.

- . 2000. *Minotaur: Sir Arthur Evans and the Archaeology of the Minoan Myth*. New York: Farrar, Straus, and Giroux.
- Macqueen, J. G. 1986. *The Hittites and Their Contemporaries in Asia Minor*. London: Thames and Hudson.
- Militello, Pietro. 2000. "L'archivio di cretule" del Vano 25 e un nuovo sigillo da Festòs." In *Administrative Documents in the Aegean and Their Near Eastern Counterparts*, ed. Massimo Perna, 221–43. Turin: Paravina Scriptorium.
- . 2006. "Attività tessile a Festòs ed Haghia Triada del Neolitico al Bronzo Tardo." *Proceedings of the 8th Cretological Conference*, 175–88. Heraklion: Historical Society of Crete.
- Müller, Sylvie, and Jean-Pierre Olivier. 1991. "Prospection à Malia: Deux documents hiéroglyphiques." *BCH* 115: 65–70.
- Olivier, Jean-Pierre. 1994–1995. "Un simili-raccord dans les barres en hiéroglyphique de Knossos (CHIC #057, #058)." *Minos* 29–30: 257–69.
- Panagiotaki, Marina. 1999. *The Central Palace Sanctuary at Knossos*. BSA Suppl. 31. London: British School at Athens.
- Pelon, Olivier. 1982. *Guide de Malia: Le palais et la nécropole de Chrysolakkos*. Sites et Monuments IX. Paris: Diffusion de Boccard.
- . 1984. "Travaux de l'école française d'Athènes en Grèce en 1988: Malia. Le palais." *BCH* 108: 881–87.
- Pernier, Luigi. 1935. *Il palazzo minoico di Festòs*, vol. 1. Rome.
- Platon, Nikolaos. 1983. "The Minoan Palaces: Centres of organisation of a Theocratic, Social, and Political System." In *Minoan Society*, 273–80.
- Postgate, John N. 1995. *Early Mesopotamia: Society and Economy at the Dawn of History*. London: Routledge.
- Poursat, Jean-Claude. 1996. *Fouilles exécutées à Malia: Le quartier Mu III: Artisans minoens: Les maisons-ateliers du quartier Mu*. Études crétoises 32. Athens: Geuthner.
- . 2000. "Malia et l'Égypte." In *Krete-Aigyptos: Politismikoi desmoi trion chilietion*. *Meletes*, ed. Alexandra Karetsou, 29–30. Athens: Hypourgeio Politismou.
- , and Carl J. Knappett. 2005. *Fouilles exécutées à Malia: Le quartier Mu IV. La poterie du Minoen Moyen II: Production et utilisation*. Etudes crétoises 33. Athens: Geuthner.
- Renfrew, Colin. 1972. *The Emergence of Civilization*. London: Methuen.
- Rethemniotakis, Georgios, and Konstantinos Christakis. 2004. "Cultural Interaction between Knossos and Pediada: The Evidence from the Middle Minoan IB Pottery." In *Knossos*, 169–76.
- Sakellarakis, Ioannis, and Effie Sapouna-Sakellarakis. 1997. *Minoan Crete in a New Light*. Athens: Ammos.
- Schoep, Ilse. 1999. "The Origins of Writing and Administration on Crete." *OJA* 18: 265–76.
- . 2001a. "Managing the Hinterland: The Rural Concerns of Urban Administration." In *Urbanism*, 87–102.
- . 2001b. "Some Notes on the "Hieroglyphic" Deposit from Knossos." *SMEA* 43(1): 143–58.
- . 2002a. "Social and Political Organisation on Crete in the Proto-palatial Period: The Case of Middle Minoan II Malia." *JMA* 15(1): 101–32.
- . 2002b. "The State of the Minoan Palaces or the Minoan Palace-state?" In *Monuments of Minos*, 15–33.
- . 2004. "Assessing the Role of Architecture in Conspicuous Consumption in the Middle Minoan I–II Periods." *OJA* 23: 243–69.

- . 2006. "Looking beyond the First Palaces: Elites and the Agency of Power in EM III–MM II Crete." *AJA* 110(1): 37–64.
- . Forthcoming a. "Bridging the Divide between the Prepalatial and the Protopalatial Period." In Schoep, Tomkins and Driessen.
- . Forthcoming b. "Making Elites: Political Economy and Elite Cultures in Middle Minoan Crete." In D. Pullen (ed.), *Political Economies of the Aegean Bronze Age*. Oxford: Oxbow.
- , and Carl J. Knappett. 2003. "Le Quartier Nu (Malia, Crète): L'occupation du Minoen moyen II." *BCH* 117(1): 49–86.
- Schoep, Ilse, Peter Tomkins, and Jan Driessen, eds. Forthcoming. *Back to the Beginning. Proceedings of the Leuven workshop*, February 1–2, 2008. Oxford: Oxbow.
- Shaw, Joseph. 2002. "The Minoan Palatial Establishment at Kommos: An Anatomy of Its History, Function, and Interconnections." In *Monuments of Minos*, 99–110.
- Strasser, Tom. 1997. "Storage and States on Prehistoric Crete: The Function of the Koulouras in the First Minoan Palaces." *JMA* 10: 73–100.
- Treuil, René, Pascal Darceque, Gilles Touchais, and Jean-Claude Poursat. 2007. *Les civilisations égéennes du Néolithique et de l'Age du Bronze*. Paris: Presses Universitaires de France.
- Tsipopoulou, Metaxia. 2002. "Petras, Siteia: The Palace, the Town, the Hinterland, and the Protopalatial Background." In *Monuments of Minos*, 133–44.
- , and Erik Hallager. 1996. "Hieroglyphic and Linear A Inscriptions from Petras, Siteia." *SMEA* 37: 7–46.
- . 1997. "A New Hieroglyphic Archive at Petras, Siteia." *Kadmos*: 165–67.
- Warren, Peter. 1985. "Minoan Palaces." *Scientific American* 253: 94–103.
- , and Vronwy Hankey. 1989. *Aegean Bronze Age Chronology*. Bristol: Bristol Classical Press.
- Watrous, L. Vance. 1987. "The Role of the Near East in the Rise of the Cretan Palaces." In *Function of the Minoan Palaces*, 65–70.
- . 2001. "Crete from the Earliest Prehistory through the Protopalatial Period." In *Aegean Prehistory*, 157–223.
- Weingarten, Judith. 1990. "Three Upheavals in Minoan Sealing Administration: Evidence for Radical Change." In *Aegean Seals, Sealings, and Administration*, ed. Thomas G. Palaima, 105–14. Liège: Université de Liège.
- . 1994. "Sealings and Sealed Documents at Bronze Age Knossos." In *Labyrinth of History*, 171–88.

- . 1998. "Mortuary Evidence, Symbolic Meanings, and Social Change: A Comparison between Messenia and the Argolid in the Mycenaean Period." In *Cemetery and Society in the Aegean Bronze Age*, ed. Keith Branigan, 41–58. Sheffield Studies in Aegean Archaeology 1. Sheffield: Sheffield Academic Press.
- Wright, James C. 1995. "From Chief to King in Mycenaean Society." In *Role of the Ruler*, 63–80.
- . 2004a. "Comparative Settlement Patterns during the Bronze Age in the Northeastern Peloponnesos, Greece." In *Side-by-Side Survey: Comparative Regional Studies in the Mediterranean World*, ed. Susan E. Alcock and John F. Cherry, 114–31. Oxford: Oxbow.
- . 2004b. "A Survey of Evidence for Feasting in Mycenaean Society." In *The Mycenaean Feast*, ed. James C. Wright, 13–58. *Hesperia* 73(2). Princeton: American School of Classical Studies at Athens.

CHAPTER 11

CRETE

ERIK HALLAGER

Two of the most outstanding single finds from the Late Minoan period discovered during the last twenty-five years are the Palaikastro Kouros and the clay sealing known as the Master Impression from Khania. Both finds have been published via an individual monograph (MacGillivray, Driessen, and Sackett 2000; Hallager 1985), and both have demonstrated how little we actually know about important aspects of the period. To the inhabitants of Late Minoan I Crete, the meaning of both objects would have been obvious, but we can only guess what they actually represent, at least on present evidence. And this is characteristic of the period: A great deal of good evidence enables us to agree on most of the facts, but uncertainties start emerging as soon as we begin to interpret the facts.

Very succinctly, the history of Late Minoan Crete can be described as a period of many changes. In the beginning, we find the flourishing time of the Minoan palaces with the first real urban society on European soil. This palatial society was destroyed by conflagrations all over the island. Of the palaces, it seems that only Knossos survived. In connection with, or some time after, these destructions we know that Mycenaean mainlanders settled in Crete, after which many aspects of the Cretan society changed. Toward the end of the Bronze Age, almost all coastal towns and settlements were abandoned, and people either moved to the mountains or emigrated.

CHRONOLOGY

Three different systems describe the relative chronology of the Late Minoan period: (1) the traditional chronology, based on stratigraphy and typology of pottery; (2) a chronology based on palatial periods; and (3) a chronology based on administrative

issues. The only one of the three where there is a reasonable agreement among scholars today is the first the traditional, relative chronology based on pottery, which can be divided into ten periods, of which LM IIIC and Subminoan are still under discussion (table 11.1).

Regarding the second system, there is little agreement on the palatial periods, with the single exception that the LM I period belongs to the Neopalatial period. In the original system introduced by Platon, the Neopalatial period lasted until the destruction of Knossos, which was thought to date to the end of LM II (Platon 1949), and was followed by the Postpalatial period. However, most scholars writing after Platon ended the Neopalatial period not at the close of LM II but rather with the numerous destructions all over Crete by the end of LM IB.

Then, as it became clear that the *wanax* (the Mycenaean word for king) and with him one or more palaces must also have existed in Crete after a destruction of the palace at Knossos at the beginning of LM IIIA2, I suggested in 1988 that the Neopalatial period was followed by a Monopalatial period during LM II–early LM IIIA2, followed by a Final Palatial period during LM IIIA2 and IIIB1. Since the palatial administration seems to cease in Crete after LM IIIB1, LM IIIB2 was considered

Table 11.1. Chronological Table Indicating Some of the Different Relative and Absolute Chronologies of the Late Minoan Period.

Natural science	Historical	Pottery	Palaces			Administration	
			Neo-palatial	Neo-palatial	Neo-palatial	Minoan	Minoan
1613	1540	LM IA	Neo-palatial	Neo-palatial	Neo-palatial	Minoan	Minoan
1525	1450	LM IB		Neo-palatial	Neo-palatial	Minoan	Minoan
1425	1400	LM II	Post-palatial	Monopalatial	Final palatial	Mycenaean	Intermediate
		LM IIIA:1		Final palatial			Mycenaean
1300	1300	LM IIIA:2		Final palatial			Mycenaean
		LM IIIB:1		Final palatial			Mycenaean
1200	1200	LM IIIB:2	Post-palatial	Post-palatial	Post-palatial		
		LM IIIC early		Post-palatial	Post-palatial		
		LM IIIC late					
1050	1050	Subminoan					

Source: Courtesy of the author.

the start of the Postpalatial period (Hallager 1988). In their *AJA* article on the Late Minoan Period, Rehak and Younger kept the phrase ‘Final Palatial period,’ but they extended it to include the Monopalatial period as well (Rehak and Younger 2001).

If we turn to the third system—a chronology based on administrative issues—there is also no agreement except for the LM I period, which is surely Minoan, with its characteristic Linear A system. To those scholars who argue for the LM II arrival and political dominance of the mainlanders, who used the Linear B administrative system, the Mycenaean period started immediately after LM I. However, other scholars are uncertain what happened in Crete during the LM II–early LM IIIA2 period and maintain that the Mycenaean period started after the LM IIIA2 destruction of the palace at Knossos and that the period in between could be designated as the Intermediate period (Hallager 1988; Niemeier 1982, 219–87).

As mentioned, the relative chronology based on pottery is reasonably secure, while other relative chronologies are exposed to individual interpretations of the archaeological data and are rather confusing concerning the LM II–LM III periods. If we turn to the absolute chronology, there is a reasonable agreement concerning the LM III period, while the LM I–II periods are under serious discussion. The absolute chronology has traditionally been based on synchronisms with Egypt. According to this approach, the Late Minoan IB period could not very well have started before c. 1540 BC (Warren 2006), while, according to recent results in the natural sciences, the eruption at Thera/Santorini, which probably happened in the later part of the LM IA period, must have taken place between 1623 BC and 1600 BC (Warburton 2009).

THE NEOPALATIAL PERIOD

Both the architecture and the administration clearly indicate a prosperous and well-organized society in the LM I period. Palaces have been excavated at Knossos, Phaistos, Malia, Zakro, and Galatas, and a palatial building has been uncovered in Petras in eastern Crete. In all probability, additional undiscovered palaces also exist in western Crete at Khandia and Stavromenos, a little east of Rethymnon. Undoubtedly, in the LM I period, Knossos was the largest and at the same time the major palace in Crete.

The architecture of the palaces is rather uniform, containing more or less the same elements, although differently situated within each complex. Multistory buildings are constructed around a central court. With the possible exception of the newly discovered palace at Galatas, the west wing of the palaces is the most consistently laid out and has an impressive façade. On the ground floor are cult rooms and large storage areas, while archives and reception areas are usually found on the upper floor.

Another characteristic element in the architecture is the so-called Minoan Hall, which consists of a light well with column and a front hall with a pier-and-door

partition leading into the main hall. There is no general agreement on the function of the Minoan Hall, which may have served as representative, private, or religious rooms. Likewise, there is no general agreement as to the function of another characteristic architectural element, the lustral basin.

Large pillar halls—possibly with banquet halls above—have been identified in the north wing of the palaces, while workrooms and storerooms are spread over the entire area. Many of the characteristic architectural elements of the palaces are repeated in the large, two-storied villas and town houses all over the island (Graham 1969). The settlements around the palaces were quite extensive and well planned, as were other towns with major (palatial?) buildings, such as Palaikastro and Gournia.

The administration of the period was quite extensive. The tools of the administration were the Linear A script and the seals, the use of which has been discovered at all of the major settlements in LM I Crete. The physical remains consist of Linear A tablets and five main types of sealings. The Linear A script is as yet not deciphered, but the tablets were probably a kind of preliminary economic document. They are found scattered throughout the settlements, while the sealings, with the exception of the *nodulus*, seem to have been kept in archives. One of the documents, the roundel, in all probability functioned as a receipt—a document that disappeared in the later Linear B administration. Among the most interesting are the flat-based (or parcel) nodules, which were apparently used to seal inscribed parchment documents. This evidence, taken together with the fact that the Linear A script was used on many noneconomic items and was also written in ink, seems to indicate that the script was much more extensively used during the LM I period than the preserved inscriptions might otherwise lead us to think.

Another interesting observation in this regard is the fact that flat-based nodules stamped with the same golden signet rings have been discovered at several different sites in LM I Crete, indicating that written documents were sent from one place to another. The signet rings used for these documents were undoubtedly official seals, which were in use for generations. This is shown by the fact that nodules impressed with one of those rings (CMSV S.3 391) have been found both in the LM IA destruction at Thera and in the LM IB destructions at Sklavokambos and Hagia Triada.

We do not know for sure the function of the one-hole hanging nodules, but there are indications that they were applied to documents written on papyrus. Furthermore, it seems certain that these nodules were impressed by both official and unofficial seals, which indicates that transactions between officials and individuals were kept in the archives. It has been suggested that these nodules were specifically attached to legal documents (Hallager 1996).

The Thera eruption had an undeniable impact on LM I Crete (Driessen and Macdonald 1997). Layers of airborne volcanic ash and seaborne pumice have been found at several sites on the northeastern coast of Crete, at Mochlos, Pseira, and Palaikastro, for example. Below a threshold in Nirou Khani was found a foundation deposit of conical cups containing pumice. The final destruction of the palace at Malia (LM IA or LM IB) is still under discussion but may also be related. In the town of Gournia, several quarters of the town were apparently not rebuilt after a

destruction in LM IA, while profound changes took place in the architecture of settlements such as Khania (Splanzia). Intriguingly, for instance, the lustral basin seems to have gone out of use in the LM IB period (Driessen 1982).

However severe the impact, the Minoans managed to overcome these immediate problems, and at several sites we see impressive new buildings constructed in the LM IB period. By the time the Neopalatial period came to an end, the island was again wealthy and prosperous, as attested by the rich finds from all of the destroyed buildings. The many instances of copper ingots (Hagia Triada and Zakro), tin ingots (Mochlos), and elephant tusks (Zakro) clearly show that raw materials for tools, weapons, and luxury items were imported to the island, while finds of LM IB pottery in Cyprus, Egypt, and the Levant, as well as several paintings of Minoan delegations in Egyptian tombs, likewise point to the cultural interconnections at this time. Even the impact of Minoan art is visible in Egypt during this period.

The end of the LM IB period also marks the end of the flourishing Neopalatial civilization. In the archaeological record, we note instances of severe destruction by fire in palaces, towns, and villas all over the island—events that changed the Minoan civilization profoundly. Three explanations have been advanced as to the cause of these events. One advanced by Evans and later supported by Furumark was internal unrest—uproars against the dominant power of Knossos. After the decipherment of Linear B, the prevailing theory was that the destructions were caused by an invasion of the Mycenaean mainlanders. Still others have suggested natural catastrophes. Combinations of the three explanations have also been suggested.

As with so many other topics, we cannot be certain about the exact source of this devastation at the end of the LM IB period, but some important points for reflection should be raised. One is that not all of the settlements were destroyed, and it was not always the entire settlement that was ruined. Thus, for example, at Knossos, extensive parts of the settlement were destroyed by fire, but not the palace proper. In Khania, rescue excavations in 1990 indicated that parts of the settlement were not damaged, but, more important, the major harbour town in southern Crete, Kommos, was not afflicted. These points seem to indicate decision makers behind the acts.

Another question we should ask in connection with the theory of the Mycenaean takeover is quite simple: Was the Mycenaean society by the end of LM IB/LH IIA sufficiently developed and politically organized to be able to conquer and maintain control over the prosperous island of Crete?

THE MONOPALATIAL OR 'INTERMEDIATE' PERIOD

The following period, LM II, does not really provide us with answers to the preceding questions since it is relatively poorly known in the archaeological record. For years it was even suggested that the period was confined to Knossos, but it has since been documented all over the island in the more important settlements. An intensi-

fied contact with the Mycenaean mainland is visible, as is demonstrated by the warrior tombs, weaponry, Ephyraean goblets, and squat alabaster, to mention just some of the most traditional arguments. Many of these points are presently the subject of debate, however, and we cannot argue the presence of a Mycenaean administrative elite in Crete at this time. Linear A is still the only certain script in use during this and the following LM IIIA1 period, but it is very limited (Popham 1976; Demopoulou, Olivier, and Rethemiotakis 1993). Driessen's attempt to date the Linear B tablets from the Room of the Chariot Tablets and the Room of the Fallen Column Bases to the LM II or LM IIIA1 period is well argued but remains unproven, and it has been questioned by one of the Knossos excavators (Popham 1993), among others.

Leaving aside the uncertain evidence of the Linear B deposits from Knossos, the evidence for administration in this period is extremely limited: There are no tablets and only a few sealings, all from Khania. Two of these are odd, flat-based nodules (CMS V s.3 103 and V S.1A 141), with a sealing system similar to that seen on some from the Room of the Chariot Tablets but also found in LM IB Hagia Triada. They have been dated to LM IB, while a third sealing from an LM IIIA1 context that does not belong to the Neopalatial types might be considered the earliest Mycenaean sealing in Crete. Many points could be—and have been—put forward that the Minoan administration continued in this period, and the answer to this problem must—on present evidence—remain open.

The architecture of the period is also not well known. The best-preserved example is the Unexplored Mansion at Knossos—a Minoan building founded during LM IA but finished only in LM II. At Kommos, it seems that the habitation continued undisturbed in the LM I buildings with some alternations, while in Khania, for example, many of the rooms in the destroyed LM I buildings were cleared of destruction debris and reinhabited with temporary repairs.

During the LM IIIA1 period, many more sites are recognized in Crete compared to the previous period. It seems, to judge from the pottery, that most of those sites were influenced by Knossos, which by then (according to our present knowledge) was the only existing palace in Crete and—one may assume—in some kind of political control.

This "Intermediate" period ended with one major event: a (but not *the*) destruction of the palace at Knossos. As to what happened, it is tempting—with parallels to many historical events—to suggest a foreign invasion. Conquer the capital, with its central administration, and you have conquered the whole—in this case— island. Moreover, by the LM/LH IIIA2 period, the Mycenaean had likely developed a strong and well-organized society capable of continuing the administrative maintenance of Crete. However, this unproven hypothesis focuses on the still-debated question of the final destruction of the palace at Knossos and the date of the Linear B tablets.

As Popham (1970) has clearly shown, the palace at Knossos suffered a destruction at the beginning of the LM IIIA2 period. Some of the key evidence originated from the deep cists in the West Magazines and their Long Corridor. The cists contained LM IIIA2 pottery (also burnt); furthermore, many contained lots of charcoal

and building material swept into them, which relate the fill of the cists to a destruction by fire. The point here, however, is that all of this material was sealed below the latest floors in use, meaning that the palace—or at least the West Wing—was rebuilt and still functioning after an early LM IIIA2 destruction. In addition, many of the Linear B tablets and sealings were discovered in the undisturbed destruction debris excavated above the sealed deep cists (Hallager 1977).

So, the question is, when did this second LM III destruction take place: immediately after the previous one in IIIA2 or a century later—probably at the end of LM IIIB1? The preserved evidence from Knossos is not enough to prove which choice is more likely, although many more complete vases of the LM IIIB period than of the LM IIIA2 period have been found scattered in the palace and surrounding buildings. In this connection, it may also be worthwhile to recall that the Linear B tablets found in 1990 in a secure late LM IIIB1 context in Khania clearly belonged to the Knossian and not the mainland scribal tradition (Hallager, Vlasaki, and Hallager 1992).

THE FINAL PALATIAL PERIOD

The importance and the meaning of the Linear B tablets are treated elsewhere in this volume, but here it should be stressed that since this is the script of the Mycenaean mainlanders and was used for the administration of Crete's wealth, it shows that at the time of the Linear B tablets we must envisage a Mycenaean elite in economic and perhaps political control of Crete. The script is now different, and so is the use of the other administrative tool, the seals. While sealings in the Minoan period were found mainly in archives and were attached to written documents, they are found in the Mycenaean administration scattered primarily in storerooms and workshops, with extremely few in archives and none—at least on present evidence—attached to written documents (figure 11.1).

While the use of script and seals in the Minoan period seemed to cover a large range of people in the society, it appears in the Mycenaean period to be confined to the administration of economic matters. Apart from tablets and sealings, the Linear B script is found inscribed only on stirrup jars, in a system that recalls the tablets and may perhaps also be part of the administrative system. Probably all of these inscribed stirrup jars, regardless of findspot, were produced in Crete; none can be dated earlier than LM IIIB. The same stirrup jars are also undeniable evidence for the presence of a *wanax* in Crete in this period. Simply put, the change in administrative practices indicates the presence of Mycenaean in Crete from LM IIIA2 onward. Other archaeological evidence—at least in west Crete (Hallager and Hallager 2003, 287)—indicates the same, but there is nothing to suggest a mass invasion from the Greek mainland.

During the Minoan period, the settlements and architecture are well known and the tombs rare and poorly known, but the situation is the opposite during the

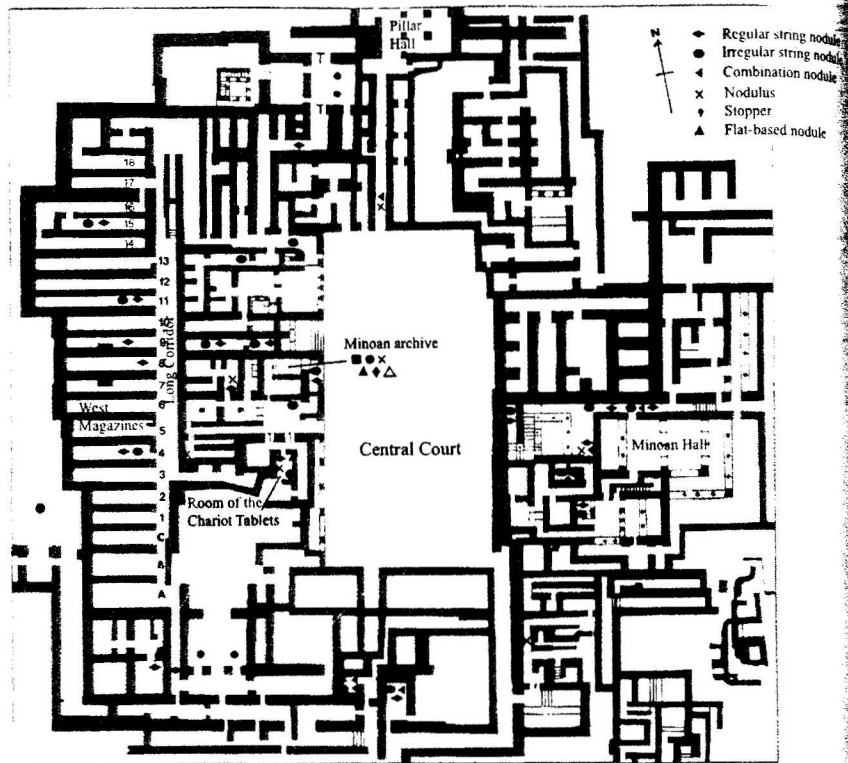


Figure 11.1. The palace at Knossos, which shows the distribution of administrative documents. With two exceptions the Minoan administrative documents were all found in the Temple Repositories (courtesy of the author).

LM III period, when the Mycenaeans are apparently in control. In this period, tombs and cemeteries are plentiful, while more substantial evidence from settlements has been brought to light only during the later years. The architecture changed from multistoried buildings, often based on wooden structures, to one-story buildings mainly constructed in stone, but the basic Minoan idea of a building where one can communicate between the different rooms was maintained.

At first glance, it seems that the material culture became much more uniform in the LB III period, but the three main areas—the mainland, the Aegean islands, and Crete—kept their strong local traditions. In Crete, the Kydonian Workshop of western Crete became dominant (perhaps together with the Knossian workshop), and its products have been found all over the island, as well as in the Cyclades, on the Greek mainland, and in Sardinia and Cyprus. It is probably only a matter of time before it is also recognized in the Levant and Egypt (figure 11.2). Imports from

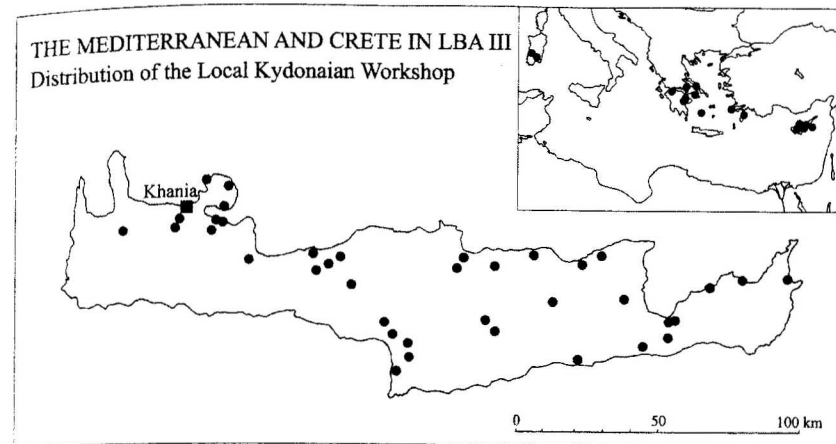


Figure 11.2. Distribution of the Local Kydonian Workshop during LM IIIA/B (copyright B. P. Hallager).

these places have also been found all over Crete, which prospered during the Final Palatial period (Cline 1994, 1999). The Handmade Burnished Ware is both interesting and significant not only because it shows the connection to southern Italy and Sardinia but also because it was locally produced in Crete, which seems to indicate the presence of south Italians as residents on the island.

THE POSTPALATIAL PERIOD

Toward the end of the Bronze Age, in LM IIIB₂, the settlement pattern starts to slowly change. Large coastal sites such as Kommos, Malia, and Palaikastro have produced only very little evidence for habitation in this period, whereas many of the so-called refuge settlements of the LM IIIC period, such as Kastrokafala, Karphi, and Kastri, are actually founded in the LM IIIB₂ period. We can see a clear prelude for what is going to happen in LM IIIC.

Communication within the island continued during LM IIIC early, but only a few of the old coastal settlements continued to exist—and only for a short period of time. The question is again, what happened? There is no doubt that this question must be seen in relation to what was going on in Europe and especially the eastern Mediterranean around 1200 BC, with the fall of the great powers—the Hittites, the Assyrians, the weakening of Egypt, the Sea Peoples, possible migrations from central Europe, and so on. These events, which have been discussed in the scholarly

world for more than a century, clearly affected Crete in that the coast was no longer a safe place to live. The Cretan Bronze Age civilization, however, continued to exist for a century or more, although all evidence of administration disappears, as does most of the evidence for close contacts with the surrounding world—indeed a period of a troubled island.

BIBLIOGRAPHY

- Cline, Eric H. 1994. *SWDS*.
- . 1999. "The Nature of the Economic Relations of Crete with Egypt and the Near East during the Bronze Age." In *From Minoan Farmers to Roman Traders: Sidelights on the Economy of Ancient Crete*, ed. Angelos Chaniotis, 115–43. Munich: Steiner.
- Demopoulou, Nota, Jean-Pierre Olivier, and George Rethemiotakis. 1993. "Une statuette en argile MR IIIA de Poros/Irakliou avec inscription en linéaire A." *BCH* 117: 501–21.
- Driessen, Jan. 1982. "The Minoan Hall in Domestic Architecture on Crete: To Be in Vogue in Late Minoan IA?" *Acta Archaeologica Lovanensia* 21: 27–92.
- , and Colin Macdonald. 1997. *The Troubled Island: Minoan Crete before and after the Santorini Eruption*. Aegaeum 17. Liège: Université de Liège.
- Graham, James Walter. 1969. *The Palaces of Crete*, 2nd ed. Princeton: Princeton University Press.
- Hallager, Erik. 1977. *The Mycenaean Palace at Knossos*. Medelhavsmuseet, Memoir 1. Stockholm: Medelhavsmuseet.
- . 1985. *The Master Impression*. SIMA LXIX. Gothenburg: Åström.
- . 1988. "Final Palatial Crete: An Essay in Minoan Chronology." In *Studies in Ancient History and Numismatics Presented to Rudi Thomsen*, ed. Erik Christiansen, Aksel Damsgaard-Madsen, and Erik Hallager, 11–21. Aarhus, Denmark: Aarhus University Press.
- . 1996. *The Minoan Roundel and Other Sealed Documents in the Neopalatial Linear A Administration*. Aegaeum 14. Liège: Université de Liège.
- , and Birgitta P. Hallager, eds. 2003. *The Greek-Swedish Excavations at the Agia Aikaterini Square Kastelli, Khania 1970–1987 and 2001*. Vol. 3, *The Late Minoan IIIB:2 Settlement*. ActaAth-40, XLVII:III. Stockholm: Svenska Institutet i Athen.
- Hallager, Erik, Maria Vlasaki, and Birgitta P. Hallager. 1992. "New Linear B Tablets from Khania." *Kadmos* 31: 61–87.
- MacGillivray, J. Alexander, Jan M. Driessen, and L. Hugh Sackett. 2000. *The Palaikastro Kouros: A Minoan Chryselephantine Statuette and Its Aegean Bronze Age Context*. BSA Studies 6. London: British School of Archaeology.
- Niemeier, Wolf-Dietrich. 1982. "Mycenaean Knossos and the Age of Linear B." *SMEA* 23: 219–87.
- Platon, Nicholas. 1949. "Η χρονολόγία των μινωικών ανάκτορων της Φαιστού." *KrChron* 1949: 150–66.
- Popham, Mervyn. 1970. *The Destruction of the Palace at Knossos: Pottery of the Late Minoan IIIA Period*. SIMA XII. Gothenburg: Åström.
- . 1976. "An Inscribed Pithoid Jar from Knossos," with an appendix by Maurice Pope and Jacques Raison. *Kadmos* 15: 102–107.
- . 1993. "Review of Jan Driessen, *An Early Destruction in the Mycenaean Palace at Knossos* (Acta Archaeologica Lovanensia Monographiae 2)." *JHS* 113: 174–78.
- Rehak, Paul, and John Younger. 2001. "Neopalatial, Final Palatial, and Postpalatial Crete." In *Aegean Prehistory*, 91–173.
- Warburton, David A., ed. 2009. *Time's Up! Dating the Minoan eruption of Santorini. Acts of the Minoan chronology workshop, Sandbjerg November 2007*. Monographs of the Danish Institute at Athens, vol. 10. Athens: Danish Institute at Athens.
- Warren, Peter. 2006. "The Date of the Thera Eruption in Relation to Aegean-Egyptian Interconnections and the Egyptian Historical Chronology." In *Timelines*, vol. 2, 305–21.

CHAPTER 14

MINOAN ARCHITECTURE

LOUISE A. HITCHCOCK

MINOAN architecture is characterized by both tradition and innovation. Although regionalism (suggesting lack of cultural integration) was more typical of tomb architecture of the Early Bronze Age (EBA), there are also some regional distinctions among Minoan palatial buildings. These distinctions are frequently overshadowed by the emphasis placed on the organization of the palaces around a central court, resulting in the use of the essentialist term “court-centered building” to describe them in recent literature (Driessen, Schoep, and Laffineur 2002). Houses were characterized by a radial plan with rooms organized around a squarish hall. A preference for corner doorways and a liberal use of corridors and staircases in the palaces and villas enhanced their complexity. Greater cultural uniformity with mainland Greece at the end of the Bronze Age is indicated by the predominance of rectilinear halls with entry on the short side throughout the Aegean.

While fortifications typify the mainland, they have also turned up on Crete, most notably at Petras. Construction techniques varied regionally and chronologically but include a variety of techniques such as timber and rubble construction in the Palatial period, mud-brick superstructures on a stone socle, drywall masonry, and ashlar masonry on a stone socle (cf. Shaw 1971). Ashlar blocks in the Aegean had a finished face but were typically cut back in a “V” or trapezoidal shape for easy fitting so that the joints between the blocks could be filled with clay and small stones. Dovetail mortises were sometimes used to anchor blocks in place. A handful of blocks on Crete preserve drafted margins with a raised and rusticated central panel that typifies later Cypriot architecture (see Hood 2000), but these are unusual. Mud bricks were used to construct the upper-story walls and were also used for repairs. Terraced platforms and especially terracing into the slope of a hill also characterized Minoan building, and these techniques persist into the present. Use of local stone

predominates in building. Stone was also used decoratively, as seen in the lavish use of gypsum orthostates at Knossos and for revetment at Phaistos and Aya Triada. Other types of decoration include carved stone elements such as horns of consecration, sparing use of carved relief, and wall paintings.

EARLY BRONZE AGE

Early Bronze Age domestic architecture on Crete is characterized by a radial arrangement of rooms around a roughly square, central hall that served as the circulation hub of the building, which stands in contrast to the use of corridors to promote circulation and privacy in later periods. This multifunctional central room also served as the main gathering area of the structure. A central pillar or column served as a support for a roof, although this was sometimes omitted, and the space could be turned into an open courtyard. This form typified houses at the EBA settlement of Myrtos-Fournou Korifi on the south coast of eastern Crete, as well as at multihousehold complexes as at Gournia and Trypeti. It also characterized vernacular architecture of the Middle-Late Bronze Age and occurs as a module in some of the palaces and palatial villas (Hitchcock forthcoming b).

A more complex example of EBA architecture is the "House on the Hill" at Vasiliki, which is, in reality, a compound made up of multiple and conjoined structures added to over time. Although no longer regarded as a protopalace, it contains features that anticipate the later palaces: (1) a paved western court with a cupule stone (*kernos*) set into the pavement; (2) carefully planned rooms with square corners and the use of corridors and stairways; (3) timber and rubble construction; and (4) red-colored stucco walls, a precursor to fresco painting.

BURIAL MONUMENTS

While house tombs of the "but-and-ben" style harking back to the Neolithic tradition represent east Crete, round (*tholos*) tombs of the Mesara Valley in southern Crete represent a regional distinction. The but-and-ben structure is characterized by a roughly square plan divided into two parts by a spur wall running down the middle with an opening at one end. This plan was also used as a module (*en chicané*) in the later Minoan palaces (Hitchcock 2000, 34–35). The lower walls were constructed of available fieldstones and larger boulders held together by mortar consisting of mud, pebbles, and broken pottery, with the upper part of the walls of mud brick. The roof was constructed of wooden beams, mud, and reeds and was coated with plaster.

The vaulted walls of the free-standing Mesara *tholoi* were constructed of roughly worked blocks preserved as high as 2 m. at Kamilari. The rough workmanship of the stone and the lack of fallen blocks from collapsed roofs of the *tholoi* argue against their having been corbelled like later mainland Greek tombs, to which they appear unrelated. Flat roofs of wood and stone or conical roofs constructed of mud brick (common in traditional round houses in contemporary Syrian and Anatolian villages) remain possibilities, although no evidence of mud brick is preserved. Entrance to the tombs is typically on the east, and Goodison (1989) argues that beliefs about the afterlife were linked to the rising of the sun. Hearths may have been used for fumigation or funerary feasting.

The MM I funerary complex of Chrysolakkos (Malia) is a rectangular, multi-chambered, ossuary structure with a court that was renewed and reused in subsequent periods, obscuring the internal arrangement of the original building. The building also had a paved court and is notable for the introduction of limestone orthostates, the use of saw-cut blocks, and dowel holes (cf. Shaw 1983).

EMERGENCE OF THE MINOAN PALACES

The first "palaces" on Crete were built in the Middle Bronze Age, around 1900 BC. Although they seem to have appeared out of nowhere, recent research indicates that the earliest versions were more modest than the second palaces, which reached their final form in the Middle to Late Bronze Age transition (Schoep 2004, 2006). Although palatial Minoan buildings quickly assumed a unique style, they may have been inspired by trade with the Near East, through a process of emulation. Monumentality implies planning, full-time craftsmen, organization of materials and labor, a high level of social complexity based on agricultural surplus, and social ranking. Monumental structures communicate permanence, power, and status (cf. Trigger 1990). Technical expertise likely developed out of the construction of impressive monumental tombs of the preceding period (Hitchcock forthcoming a). The stratified social structure that would have led to their construction likely emerged out of the activities required to oversee large-scale building projects and out of the prestige-goods economy based on acquisition of foreign and exotic luxury goods known from the earlier tombs.

Repair and rebuilding restricts our knowledge of the first Minoan palaces. What is known about them includes their paved, public west courts with stone-lined pits (*kouloures*) and raised, triangular causeways (presumably for processions); indented west façades fronting storage magazines; rectangular central courts with 2:1 proportions and oriented north-south; and remnants of pillared halls in the east wing at Knossos (MacGillivray 1994).

The indented façades, which create a play of light and shade, may indicate Egyptian and Near Eastern influences. Commonly accepted views that the west courts

of the palaces served as public gathering places is influenced by the depiction of ritual dancing among sacred trees on the "Sacred Grove" fresco from Knossos. The function of these features changed by the Second Palace period, when the *kouloures* were filled in at Knossos and Phaistos. At Phaistos, the causeway was also paved over.

New evidence for understanding the first palaces comes from the monumental building at Monastiraki (Amari Valley, western Crete) and from Quartier Mu at Malia, where features we associate with the largest and most famous Minoan palaces occurred earlier. Two gamma-shaped doorjambs carved out of limestone from Monastiraki represent what may be the earliest example of a feature typically associated with later pier-and-door-partition (*polythyron*) halls (Kanta, comment in Perna 2000, 208). A Middle Minoan IB-II architectural parallel for the "throne room" at Knossos consisting of anteroom, hall with "lustral basin," rear service room, and four side chambers was uncovered in Quartier Mu at Malia (Niemeier 1987). The appearance of multiple buildings with palatial features at Malia has led to proposals of competing factions or heterarchy in Crete (Schoep 2004, 2006). The first palaces suffered damage and/or destruction, probably from earthquakes, just before the beginning of the Late Bronze Age, ca. 1700 BC. At this time some of the buildings were remodeled, and new palaces and smaller, palatial "villas" were constructed all over Crete.

LATE BRONZE AGE: THE SECOND PALACE PERIOD ON CRETE

The plans and organization of the second palaces at Knossos, Phaistos, Malia, and Kato Zakro are similar enough to suggest that they were initially designed and executed for each community by the same team of professional planners (Preziosi 1983). However, their construction was executed with varying degrees of skill, and the unit of measurement used is contested (see Hitchcock 1997). The most striking characteristic of the Minoan palaces is their monumentality, which combines ashlar masonry, multiple stories, and architectural decoration such as horns of consecration. Some of the ashlar blocks were engraved with symbols of uncertain significance, termed "mason's marks." The use of timber and rubble in building the walls may have provided flexibility in times of earthquake (cf. Driessen 1987).

Spacious, paved, and public west courts continued, as did the north-south orientation of the central court. Frequently this orientation also referenced a sacred mountain housing peak and/or cave sanctuaries. Goodison (2001) has shown that the east-west orientation was also important, whereby the rising sun might illuminate particular features in the west wings. The coastal locations of the second palaces also communicated prestige to visiting traders.

Whether navigating a Minoan building or looking at a ground plan, one is impressed by their labyrinthine layout. Upon careful study, the visitor becomes aware of a specific architectural vocabulary, recurring types of rooms, and a complex organizational structure (cf. Preziosi 1983). This vocabulary includes elaborate halls that are located in the northwest and/or east wing, small sunken rooms (lustral basins), small dark rooms ("pillar crypts") located near storage areas, other areas devoted to ritual activity in the west wing, storage and industrial quarters frequently located in the west or northwest wing, a main entrance, additional minor entrances, and a hypostyle (pillared) hall in the north wing (Hitchcock 2003). The palaces were also decorated with wall paintings, painted stucco, and/or veneering. In addition, each building has certain features that make it unique—for example, the famous "Throne Room" that occurs only at Knossos, round and rectangular pools built of cut stone that occur only at Kato Zakro, the *baetyls*, which are found in the west court at Gournia and in the central court at Malia, and the presence of four lustral basins at Phaistos (more than at any other palace). Variation in the distribution of corridors, stairways, and doorways gives each building a complex uniqueness that underlies superficial similarities in the location of rooms. For example, two rooms might share a common wall yet may be separated by a long, winding route. These kinds of distinctions make the palaces and villas one-of-a-kind architectural masterpieces.

The "Minoan hall" is one of the most notable features of Minoan architecture and enhances its mazelike qualities (Palyvou 1987; Driessen 1982). It is composed of several rectangular rooms separated by a row of columns and a set of square piers. The piers support double doors that fold back into shallow recesses, allowing for the manipulation of light, ventilation, and movement. These pier-and-door partitions separate a hall into two parts, a hall and a forehall. A lightwell is separated from the other two rooms by a row of columns and allows light and ventilation into the building. The pier-and-door partitions can be used to either collapse or open up a room. If they form two or more walls of a room, the complexity of circulation within a building is further increased. The Minoan hall constitutes a feature that is uniquely Minoan.

Minoan halls were lavishly appointed, sometimes with gypsum dadoes, sometimes with fresco paintings. They tended to be located in the northwest and/or east wings of the Minoan palaces. A second, smaller hall was frequently built adjacent to a larger pier-and-door partition hall. It was sometimes appointed with pier-and-door partitions or was more exposed to the elements with multiple windows or columns replacing a wall, sometimes with benches and/or a lightwell. A lack of objects found in Minoan halls makes it difficult to know how to interpret them. They have been viewed as ritual spaces and as sleeping areas, with the smaller hall designated as a "Queen's" or "women's" quarters (e.g., Graham 1987). A consideration of context affords additional possibilities. Minoan halls could be put to multiple purposes depending on the time of day, the season, and specific needs. Possible functions include, but are not limited to, a circulation hub within

a building, a ceremonial gathering and/or meeting area, as well as a general living space (cf. Hitchcock 2000, 157–76).

In at least two instances (especially Ayia Triada, Kato Zakro), Minoan halls were located near tablet archives. This raises the possibility that they served as a meeting place for palace administrators. Ritual, administrative, and social activity does not exclude other, more practical uses for the Minoan hall, such as sleeping at the end of the day. In short, we can view them as all-purpose gathering spaces, although changing their relationship to neighboring rooms could radically alter their purpose. For example, they have been utilized as entrances when placed at the front of a building (Nirou Khani, Phaistos), circulatory areas when placed in the center of a cluster of rooms (Tyliisos A), and private gathering spaces when segregated at the rear (Tyliisos C).

Another architectural feature that is uniquely Minoan is a small room referred to as a “lustral basin” (Hitchcock 2000, 163–79). This is a small, rectangular room sunken below the floor level and reached by a short flight of stairs, making a turn and running along a parapet and always open off of a rectangular anteroom. They are interpreted as sites of ritual initiation, purification, symbolic descent into the earth, and bathing. Sir Arthur Evans (1921, 405–22) named them “lustral basins,” believing that the oil jars found in a Knossian basin were used for ritual cleansing. Horns of consecration are another frequent association. They are sometimes decorated, often with gypsum veneering; one example is frescoed (Chania). Contextual differences suggest that they were multifunctional. However, bathing is unlikely based on the water-soluble nature of the gypsum revetment, the public nature of some of the basins near entrances and opposite the “throne” at Knossos, and the absence of drainage. This is most clearly indicated in house Xeste 3 (Akrotiri), where, in addition to a lustral basin, there are two tubs set into clay benches with drains attached. In the Minoan villas, most (if not all) of the lustral basins were filled in when pier-and-door partition halls with lightwells were added (Driessen 1982), indicating that the palaces took over control of their function.

The palaces had multiple entrances, which segregated the activities taking place in the various wings. Certain entrances were more ceremonial in character: appointed with special pavements, procession frescoes, or pier-and-door partitions. The main entrance at Kato Zakro at the northeast end of the building connects the palace with the road to the harbor. At other palaces the main entrance is frequently on the west or southwest end of the building. A variety of drains carried water and runoff away from the palaces. They were constructed using slab-lined channels of various sizes, U-shaped clay segments, clay drain pipes, and a unique series of settling basins at Knossos that were joined by drains with parabolic runnels, believed to slow down the speed of the water (see Shaw 1971).

The palaces also featured rows of long, narrow storage magazines, which were frequently located in the west and north wings and sometimes held large storage jars (*pithoi*) that were rarely (if ever) moved. As much as one-third of the ground space of the Minoan palaces was devoted to storage (Begg 1987), and this area was even greater at Malia, where the east, west, and a substantial part of the north wing was utilized.

Workrooms in Minoan buildings tended to be slightly wider than storerooms. These well-lit spaces were undecorated and were sometimes distinguished by special features connected with a particular activity; they might also contain raw or partially worked materials. Open areas and rooftops were also used for industrial activity. Additional storage areas were distributed among other wings of the palaces—in the crawl space beneath stairways and on upper floors, as indicated by fallen objects.

Sockets and bases for columns and fresco representations indicate that wooden columns were frequently used as architectural supports. They are depicted as red with a black, bulbous capital and tapering downward, sometimes with double axes embedded in them, but there is no clear evidence that the Minoans employed a canon of proportions with regard to a base-to-height ratio. Impressions from the lustral basin in a villa known as the Little Palace at Knossos preserve the only evidence of fluted columns. Columns were used in staircases, lustral basins, colonnades, and peristyle courts and as supports in square and impluvium (so-called Palaikastro-style) halls (Driessen 1989–1990, 14n85). Another preferred form of support was the stone pillar. Although monolithic pillars are attested, they were more frequently segmented. Pillars were used in hypostyle halls, colonnades, and storage rooms but have attracted the most attention when found in pillar crypts.

The term “pillar crypt” was coined by Evans to refer to small, dark rooms located near the storage magazines at Knossos that contained a central pillar with incised double-ax markings. They are regarded as architectural and aniconic representations of the stalactites and stalagmites worshipped by the populace in sacred caves (cf. Evans 1901). They occur in palaces and villas in close association with or connected to storage areas. At some sites they also served as storerooms. Possible ritual symbols associated with them include mason’s marks, pyramidal stone stands for holding cult emblems, and cists cut into the floor, possibly for pouring libations into the earth (see Gesell 1985, 148).

CYCLADIC ARCHITECTURE

Cycladic buildings on Kea, Thera, and Melos show both Minoan and, later, Mycenaean influences. Ayia Irini on Kea is notable for the numerous Minoan architectural features and fresco motifs found at House A. These can be contrasted with a local building technique and design differences in the neighboring houses. Most notable in its contrast to House A is House F, which consists of a series of axially aligned rooms arranged in a linear fashion, one behind the other.

House A was a multiroomed structure divided into a service wing and a wing containing residential rooms. This type of arrangement is comparable to Tyliisos House A (Crete) and Xeste 3 (Akrotiri), although it was constructed using drywall masonry, a local technique, in contrast to ashlar masonry used in

these other houses. House A incorporates numerous Minoan features, including a lightwell, pillar room, dual halls, a courtyard, a labyrinthine circulation pattern, a nonaxial layout of rooms, some attempt at cut or ashlar masonry in wall façades, traces of indented façades, cut-slab pavement with red plaster in its interstices, a U-shaped stone drain, slots for a wooden door frame, terraced construction techniques, a staircase-and-entry combination, an auxiliary staircase, the bipartite division of the building into storage/work and living areas with a west orientation for the storage/workrooms, and the presence of figural frescoes (Hitchcock 1998).

Most of the houses at Akrotiri on Thera incorporated Minoan architectural features, and some were clearly altered to give them a more Minoan-looking, radial style of plan. Minoan features known from Akrotiri include ashlar masonry, mason's marks, horns of consecration, the wrap-around lightwell in the House of the Ladies, which parallels Knossos in miniature, a lustral basin in house Xeste 3, pier-and-door partitions in a number of houses, liberal use of figural frescoes and auxiliary staircases, an association of stairways and entrances, and division of Xeste 3 into service and living/ceremonial areas. Although a couple of features (pillar crypt and canonical pier-and-door partition hall with lightwell) are conspicuously absent, this is a broader range of features than occurred at either Ayia Irini or Phylakopi on Melos, where just a pillar crypt and figural frescoes have been detected. This may have been a result of Akrotiri's proximity to Crete.

RELIGIOUS ARCHITECTURE

Peak Sanctuaries

As the Minoan palaces gained prominence, these sites became more formalized, suggesting elite control. This was indicated by the introduction of simple structures at some sanctuaries including a built altar, terraces to level out the approach, some storage rooms, sometimes a *temenos*, and sometimes horns of consecration. Linear A-inscribed offering tables and other luxury offerings also indicate palatial influence.

Bench Shrines

Cult activity at Postpalatial sites in Crete such as Gazi, Gournia, and Kavousi tends to take place in small rectangular rooms with benches running along one wall for placing offerings. These are commonly referred to as bench shrines or sanctuaries. Sometimes such shrines were established in the ruins of existing structures (ruin cult) as at Knossos (Prent 2004).

POSTPALATIAL ARCHITECTURE

Postpalatial architecture on Crete is characterized by the appearance of the mainland style *megaron*, a hall and porch structure with side corridor that provides access to a series of side chambers. Monumental versions of such a building are found at Gournia and at Ayia Triada. Also, at Ayia Triada is a stoa that replicates the main features found much later in the classical stoa: a row of rooms with a porch supported by a colonnade composed of alternating pillars and columns with a stairway on the side. The occasional use of saw-cut blocks and the Minoan practice of setting column bases into a stylobate persisted in LM III Crete. At LM IIIC Kavousi-Vronda, the "chieftain's" house, preserved Minoan design features in the form of rectangular magazines combined with a mainland-style megaroid hall and a paved west court with cupule stone (*kernos*). More typically, Postpalatial architecture featured a rectilinear hall, a hearth, and sometimes a linear arrangement of columns as in the "chieftain's" house at Kavousi-Kastro. Doorways might be placed axially in these structures, as preferred on the mainland, or located to one side, as preferred in Crete.

CONCLUSION

Administrative devices, the setting aside of numerous spaces for storage, and the presence of large, public courts have led archaeologists to view Minoan palaces as centers for organizing redistribution and trade in a prestige-goods economy and for holding rituals at special times of the year such as the planting and harvest seasons, as well as to mark transitional periods. The purpose of such celebrations would be to promote community solidarity and legitimize the role of the palaces in these processes. Toward the end of their histories, the Minoan palaces developed restricted access (see Driessen and MacDonald 1997) but not before their technical sophistication was passed on to their Mycenaean successors.

BIBLIOGRAPHY

- Begg, Donald J. I. 1987. "Continuity in the West Wing at Knossos." In *Function of the Minoan Palaces*, 179–84.
- Driessen, Jan. 1982. "The Minoan Hall in Domestic Architecture on Crete: To Be in Vogue in Late Minoan IA?" *Acta archaeologica Lovanensia* 21: 27–92.
- . 1987. "Earthquake-resistant Construction and the Wrath of the 'Earth-Shaker.'" *Journal of the Society of Architectural Historians* (June): 171–78.

- . 1989–1990. “The Proliferation of Minoan Palatial Architectural Style: (I) Crete.” *Acta archaeologica Lovanensia* 28–29: 3–23.
- , and Colin MacDonald. 1997. *The Troubled Island: Minoan Crete before and after the Santorini Eruption*. Aegaeum 17. Liège: Université de Liège.
- Driessen, Jan, Ilse Schoep, and Robert Laffineur, eds. 2002. *Monuments of Minos*.
- Evans, Arthur J. 1901. “Mycenaean Tree and Pillar Cult.” *JHS* 21: 99–204.
- . 1921. *PM*, vol. 1.
- Gesell, Geraldine C. 1985. *Town, Palace, and House Cult in Minoan Crete*. SIMA 67. Gothenburg: Åström.
- Goodison, Lucy. 1989. *Death, Women, and the Sun: Symbolism of Regeneration in Early Aegean Religion*. Bulletin of the Institute of Classical Studies Supplement 53. London: University of London, Institute of Classical Studies.
- . 2001. “From Tholos Tomb to Throne Room: Perceptions of the Sun in Minoan Ritual.” In *Potnia*, 77–88.
- Graham, James W. 1987. *Palaces of Crete*. Reprint of 1962 edition. Princeton: Princeton University Press.
- Hitchcock, Louise A. 1997. “The Best Laid Plans Go Astray: Modular (Ir)regularities in the ‘Residential Quarters’ at Phaistos.” In *TEXNH*, 243–50.
- . 1998. “Blending the Local with the Foreign: Minoan Features at Ayia Irini, House A.” In *Kea-Kythnos: History and Archaeology: Proceedings of an International Symposium, Kea-Kythnos, 22–25 June 1994*, ed. Lina G. Mendoni and Alexander J. Mazarakis-Ainian, 169–74. Athens: Research Centre for Greek and Roman Antiquity National Hellenic Research Foundation.
- . 2000. *Minoan Architecture: A Contextual Analysis*. SIMA Pocket Book 155. Jonsered, Sweden: Åström.
- . 2003. “Understanding the Minoan Palaces.” *Athena Review* 3.3: 27–35.
- . Forthcoming a. “Monumentalizing Hierarchy: The Significance of Architecture in the Emergence of Complexity on Minoan Crete.” *Proceedings of the 10th International Congress of Cretan Studies, October 2006*, vol. A. Chania, Crete.
- . Forthcoming b. “Never Momentary, but Always Fluid and Flexible: Revisiting the Vernacular Tradition in Bronze Age Crete and Cyprus.” In *STEGA: The Archaeology of Houses and Households in Ancient Crete*, ed. Kevin Glowacki and Natalia Vogeikoff-Brogan. Hesperia Suppl. Princeton: American School of Classical Studies at Athens Press.
- Hood, Sinclair. 2000. “Masonry with Drafted Margins in Bronze Age Crete.” *Eirene* 36: 20–26.
- MacGillivray, J. Alexander. 1994. “The Early History of the Palace at Knossos (MM I–II).” In *Labyrinth of History*, 45–55.
- Niemeier, Wolf-Dietrich. 1987. “On the Function of the ‘Throne Room’ in the Palace at Knossos.” In *Function of the Minoan Palaces*, 163–68.
- Palyvou, Clary. 1987. “Circulatory Patterns in Minoan Architecture.” In *Function of the Minoan Palaces*, 195–203.
- Perna, Massimo, ed. 2000. *Administrative Documents in the Aegean and Their Near-Eastern Counterparts: Proceedings of the International Colloquium, Naples, February 29–March 2, 1996*. Torino: Centro internazionale di ricerche archeologiche antropologiche e storiche.
- Prent, Mieke. 2004. “Cult Activities at the Palace of Knossos from the End of the Bronze Age: Continuity and Change.” In *Knossos*, 411–19.
- Preziosi, Donald. 1983. *Minoan Architectural Design*. Berlin: Mouton.

- , and Louise A. Hitchcock. 1999. *Aegean Art and Architecture*. New York: Oxford University Press.
- Schoep, Ilse. 2004. “Assessing the Role of Architecture in Conspicuous Consumption.” *OJA* 23(3): 243–69.
- . 2006. “Looking beyond the First Palaces: Elites and the Agency of Power in EM III–MM II Crete.” *AJA* 110(1): 37–64.
- Shaw, Joseph W. 1971. *Minoan Architecture: Materials and Techniques*. Annuario della Scuola archeologica di Atene e delle Missioni in Oriente 49. Roma: L’Erma.
- . 1983. “The Development of Minoan Orthostates.” *AJA* 87(2): 213–16.
- Trigger, Bruce. 1990. “Monumental Architecture: A Thermodynamic Explanation of Symbolic Behaviour.” *World Archaeology* 22(2): 119–32.

CHAPTER 16

FIGURINES

IOULIA TZONOU-HERBST

A recent thought concerning Aegean prehistoric figurines was penned by Colin Renfrew in one of his latest books:

We do not know, and we shall probably never know, quite why they were made. They may not have been created simply and solely to be "good to look at." They may also have had ritual functions, or served as toys, or as educational aids. But it is difficult not to imagine that at least one of the intentions of the maker of each was that the work should be well made and indeed be "good to look at." (Renfrew 2003, 77)

The trajectory of Renfrew's scholarship parallels the trends in the study of Aegean Bronze Age figurines. In 1969 he produced the typological sequence of Early Cycladic (EC) figurines; at Phylakopi in 1985 he established the criteria for the identification of Bronze Age Aegean sanctuaries in the archaeological record, in which figurines play a central role; and in 2003 he doubted whether we will ever know their meanings. After the establishment of typologies and chronologies, scholars have searched for interpretations based on certain criteria, and then they questioned whether the archaeological record preserves any clues to help uncover the meaning figurines had for their makers and owners. Before discussing the intricate problem of meaning, I describe the archaeological evidence, the various types of figurines—Helladic, Minoan, and Cycladic—and their excavated contexts. I also consider methodologies of interpretation from different points of view: religion, identity, and archaeological context.

PRELIMINARY OBSERVATIONS

Figurines are small-scale representations of humans, animals, and objects that were regularly produced throughout the Bronze Age in the Aegean, continuing an extant tradition from the Neolithic period (figure 16.1). While Cycladic and Minoan products develop continuously, the mainland tradition of female figurines with exaggerated body features dies out in the Early Bronze Age (figures 16.1.1, 16.1.6, 16.2.1).

Materials differ from period to period and between regions. While clay seems to have been the most common material used, stone (particularly marble) is also prevalent; moreover, metal, bone, ivory, faience, sea pebble, and shell examples also exist.

Size distinguishes figurines from figures, which approach the size of small statues (figure 16.2). Thus, Mycenaean figurines range between 0.05 and 0.20 m. in height, while figures reach 0.35 m. (type A) to 0.69 m. (type B) (figure 20.1). Minoan figurines are small, 0.10–0.15 m. at Petsophas, while the faience snake figures are up to 0.35 m. tall; the figures with upraised hands range from 0.22 to 0.85 m., and the figures from the temple at Ayia Irini in Kea measure between 0.70 and 1.35 m. EC examples measure from 0.05 to 1.5 m. Apart from size, the technique of manufacture of the terracottas also differs. Figurines are handmade; figures wheel made.

The quantity of figurines present in the archaeological record is indicative of their use. Fewer than 2,000 EC figurines are known, produced over some 600–700 years in the third millennium BC. In contrast, at least 4,500 have been uncovered at a single site, Mycenae, dating between 1400–1100 BC. Figures are much rarer. Seventeen Mycenaean figures exist to date, along with 43 Minoan from the Postpalatial period.

The archaeological contexts in which figurines have been excavated encompass architectural settings and object assemblages that relate them to various spheres of human activity. Throughout the Bronze Age, people buried figurines with their dead. They also used them in other ritual activities that are more difficult for us to reconstruct, but they had them in their houses as well. They recycled them and eventually threw them away when they no longer had any use for them. On the other hand, figures appear only in settings related to ritual.

EARLY BRONZE AGE

In the EBA, anthropomorphic marble figurines were produced in the Cyclades. Traces of paint indicate that bright colors originally highlighted the details of face and body (Hendrix 2003). Schematic representations early in the EC period are replaced later in the period by more anatomically detailed examples, the canonical or Folded-Arm Figurines (FAF). The schematics include the violin, notch-waisted, and pebble types, among others, which are self-explanatory of the shape. The FAF stand on tiptoe with the head tilted back and the arms folded over the stomach. Seated and double

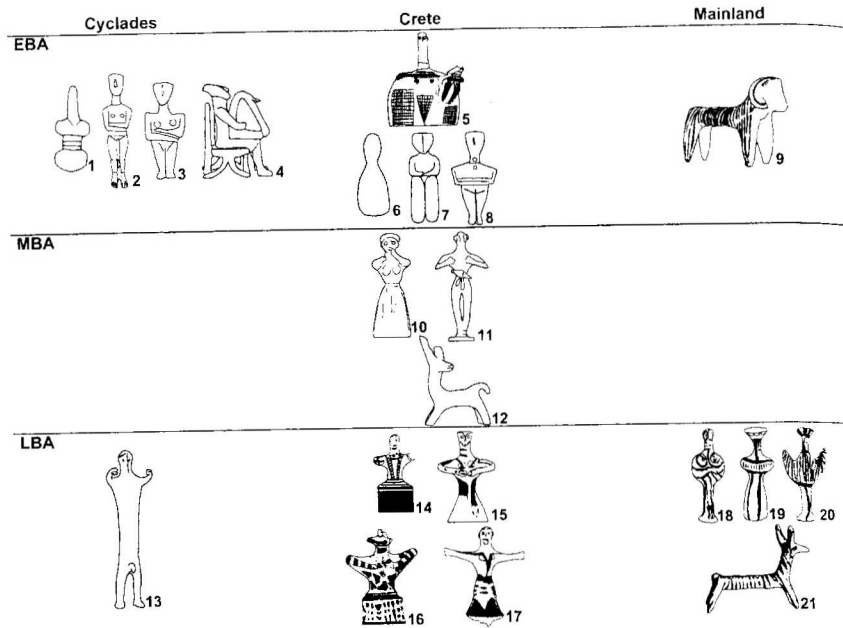


Figure 16.1. Chronological development and spatial distribution of Aegean Bronze Age figurines (not to scale): (1) EC I white marble figurine, Violin type; (2) EC II white marble figurine, Late Spedos variety; (3) EC II white marble figurine, Chalandriani variety; (4) EC II white marble harpist, from Keros? (National Archaeological Museum); (5) "Goddess of Myrtyos," EM terracotta female figurine from Myrtyos, Fournou Korifi; (6) EM schematic figurine, Troy I type from Lebena; (7) EM female figurine, Trapeza type from Trapeza; (8) EM female figurine, Koumasa variety; (9) EH terracotta animal figurine from Corinth; (10) MM I-II terracotta female figurine from the peak sanctuary of Petsophas, near Palaikastro; (11) MM I-II terracotta male figurine from the peak sanctuary of Petsophas, near Palaikastro; (12) MM I-II terracotta deer figurine from a communal tomb at Porti, Mesara Plain; (13) LC terracotta male figurine from the sanctuary at Phylakopi, Melos; (14) LM IIIA terracotta female figurine from Mavrospilio; (15) LM III A-B terracotta female figurine from a grave at Khandia; (16) LM II-III A1 terracotta female figurine with smaller male figurine in her arms, from Mavrospilio; (17) LM IIIA terracotta female dancer figurine from Palaikastro; (18) Mycenaean (LH III B) terracotta female figurine, Phi type, from Zeli, Lamia; (19) Mycenaean (LH III B) terracotta female figurine, Tau type, from chamber tomb XXXVI, Prosymna, Argolid; (20) Mycenaean (LH III B) terracotta female figurine, Psi type, from chamber tomb XXXIII, Zygouries, Corinthia; (21) Mycenaean (LH III A-B) terracotta animal figurine from chamber tomb XXII, Prosymna, Argolid (all drawings by J. A. Herbst).



Figure 16.2. Figurines and figures. (1) Late Neolithic white marble schematic figurine from Paros; (2) EC II white marble female figurine, Late Spedos variety, Fine Arts Museums of San Francisco, from "Keros Hoard"; (3) EM white marble female figurine, Koumasa variety, from Teke, Crete; (4) EH terracotta animal figurine from Corinth; (5) bronze male figurine, "Minoan salute" type, British Museum; (6) Neopalatial male statuette made out of serpentine, rock crystal, wood, gold, and ivory, from Palaikastro; (7) neopalatial faience "snake goddess" from Temple Repositories, Knossos; (8) LM IIIA terracotta female figurine from Myrsini, Ayios Nikolaos; (9) LM II-III A1 terracotta female figurine with smaller male figurine in her arms, from Mavrospilio; (10) LM IIIA terracotta female figurine from Mavrospilio; (11) Mycenaean (LH III B) terracotta female figurine,

continued

Tau type, from chamber tomb XXXVI, Prosymna, Argolid; (12) Mycenaean (LH IIIA1) terracotta female figurine of kourotrophos from cist tomb 12, Deiras, Argos; (13) Mycenaean (LH IIIB) terracotta female figurine, Phi type, from Zeli, Lamia; (14) Mycenaean (LH IIIB) terracotta female figurine, Psi type, from chamber tomb XXXIII, Zygouries, Corinthia; (15) Mycenaean (LH IIIA–B) terracotta animal figurine from chamber tomb XXII, Prosymna, Argolid; (16) Mycenaean (LH IIIA–B) terracotta chariot figurine from chamber tomb XXII, Prosymna, Argolid; (17) Mycenaean (LH IIIA2) terracotta female figure, type A, from Room 19, Temple, Cult Center, Mycenae; (18) Mycenaean (LH IIIC) terracotta female figure, type A, Lower Citadel, Tiryns; (19) LM IIIB–C terracotta female figure, “Goddess with Upraised Arms,” from shrine at Gazi (arranged by J. A. Herbst).

figurines, musicians, and warriors also exist (Renfrew 1969, 28, figure 4; 1991, 90–91; Peggy Sotirakopoulou 2005, 50–51) (figures 6.2, 16.1.1–4, 16.2.2).

Scholars are divided as to whether EC figurines were made exclusively as funerary goods or intended for consumption in other settings as well (Davis 1984; Renfrew 1984; Panayioti Sotirakopoulou 1998, 153–158). They have been excavated mainly in cemeteries and occasionally in settlements such as Phylakopi on Melos, Ayia Irini on Kea, and Akrotiri in Thera. Excavations are under way at the enigmatic site at Kavos Daskaleio on Keros and will provide answers regarding the site from which numerous figurines were recovered in the 1950s and 1960s, the “Keros Hoard.” Was it a sanctuary, settlement and cemetery, or a ritual deposit (Renfrew 2006; Peggy Sotirakopoulou 2008)? In tombs, one or many figurines (up to fourteen) accompany a single burial. Both male and female figurines are interred with many valuable grave goods or none at all. They are not equally common in all islands (Gill and Chippindale 1993, 609). For example, Tsountas (1899, 78–79, 100) excavated six figurines in 540 graves at Chalandriani in Syros.

Archaeological contexts of figurines indicate different customs on the mainland. Early Helladic (EH) terracotta representations of cattle and goats were predominantly excavated not in cemeteries or shrines but in settlements, as at Lithares in Boeotia, and at Tsoungiza and Corinth in the Peloponnese (figures 16.1.9, 16.2.4). The representations paint a picture of everyday life. The people at Lithares made figurines of bulls, an animal they loved to eat (Tzavella-Evjen 1985, 20). In Corinth, the figurines with slits in their bellies may represent slaughtered and gutted animals, if the slits were not simply part of the manufacturing processes (Phelps 1987; Pullen 1992, 50). The yoked oxen from Tsoungiza show that people used animal traction and the plow in cultivating their fields in EH times (Pullen 1992).

Early Minoan or Prepalatial anthropomorphic and zoomorphic clay figurines were used in Crete in domestic contexts, as at Myrtos and Vasiliki; in cemeteries, as at Koumasa; and in caves, as at Trapeza. The so-called Goddess of Myrtos, a figurine holding a jug, was used in a room with a bench and storage, along with pouring and cooking pots (Warren 1972) (figure 16.1.5). Another figurine from the same settlement was reused in road packing. In addition to terracotta figurines, ones made in stone and ivory were placed as grave goods in tholos and, more rarely, in house tombs. In contrast to the Minoan taste for ivory, bone and ivory figurines are rare

on the mainland (Andrikou 1998). Figurines of Troadic and Cycladic inspiration produced in Crete show that people and ideas traveled between these areas of the Aegean in the EBA (Branigan 1971) (figures 16.1.6, 16.1.8, 16.2.3).

MIDDLE BRONZE AGE

Figurine production diminishes in the Cyclades and the mainland in the Middle Bronze Age, whereas it flourishes in Crete. In the Protopalatial (MM I–II) period, thousands of terracottas were dedicated at peak sanctuaries located on mountain-tops. Finds include human and animal figurines and votive limbs. Mount Jouktas, for example, produced far more male than female figurines. Among other votives were human heads, hands, and torsos; sheep/goats, pigs, birds, snakes, and bucrania; clay balls, floral branches, women in childbirth, and phalloi.

Similar finds were made at Petsophas above Palaikastro within the enclosure wall of the sanctuary and in the rocks and crevices outside the confines of it. Male and female are differentiated by their gestures: The males fold their hands on the chest, the females extend their arms upward or outward (figures 16.1.10, 16.1.11).

At the small rural sanctuary at Atsipades, hundreds of clay phalloi were found. Rethemiotakis (1998, 51) believes the votives were dedicated by farmers and shepherds asking the god to intervene and protect plants and animals. Watrous (1995, 402) interprets them as part of a cult concerned with male and female maturation. While figurines were repeatedly deposited in the peak sanctuaries, few have been excavated in domestic contexts—at Malia, Tylissos, Vasiliki, at the farm house at Khamaizi—and they are rare among tomb offerings (figure 16.1.12).

LATE BRONZE AGE

At the end of the Protopalatial and beginning of the Neopalatial (MM III–LM IB) period, the production of terracottas diminishes markedly. Bronze and ivory are favored, while clay figurines imitate examples in those materials. Well more than one hundred bronze Neopalatial human figurines have been excavated in peak sanctuaries, caves, palaces, and villas. They are distinguished by at least eight different gestures: ‘the Minoan salute,’ or one hand on the forehead; both arms bent toward the face, placed on the hips, or folded or crossed on the chest; one on the chest and the other at the side (Hitchcock 1997) (figure 16.2.5).

The production and distribution of bronze was controlled by the palace. The high quality of workmanship, evident in the detailed and possibly individuating features of the figurine from Kato Symi, strengthens the argument that the owners

of these bronzes belonged to an elite stratum of Minoan society that had access to the palace. Similarly, the Palaikastro chryselephantine statuette certainly belonged to a higher-status member of society because of the exquisite workmanship of the luxury material (figures 16.2.6, 43.2).

In contrast to the bronze figurines, schematic and naturalistic, male and female terracottas have no canonical poses in the Neopalatial and Postpalatial (LM II to LM IIIC) periods (figures 16.1.14–17, 16.2.8–10). There are fantastic and domestic animals: oxen, bulls, cats, dogs, sheep, agrimia, birds, and beetles. Kourotophoi and dancers are represented, while a clay model from Kamilari with individuals bringing offerings to larger persons may depict a scene of honoring the dead.

Gesell's studies (1985, 2004) of the architecture and find combinations have identified as shrines structures containing figurines associated with other cult equipment. Neopalatial shrines in the palaces at Phaistos and Malia, peak sanctuaries at Traostalos and Kophinas, open-air shrines, villa shrines, and Postpalatial town and house shrines all contained these items. Other ritual settings with figurines include graves, such as those at Mavrospilio and Kalou Temenous.

Figurines do not appear solely in ritual settings in Crete. Less well known are domestic contexts such as those at Siva in Mesara and Malia in Neopalatial times, as well as an LM IIIB2–IIIC trash deposit at Khania. Within Rubbish Area North, many pits contained pottery, animal bones, stone tools, bronzes, and a large concentration of females and animal figurines. There is no evidence that this was a religious waste deposit (Hallager 2001). The presence of figurines in ritual, domestic, and trash deposits indicates that they had multiple meanings for the Minoans.

Mycenaean terracottas recovered in comparable assemblages support their multivocality as well. Contrary to the Minoan examples, which are individual in their gestures, Mycenaean or Late Helladic (LH) III figurines were mass produced. Phi, Tau, and Psi female types derive their names from the similarity of their form to the respective Greek letters (figures 16.1.18–20; 16.2.11, 16.2.13–14). Wavy, Linear, Spine, and Ladder animals are named based on designs in red paint (figures 16.1.21, 16.2.15). Other types represent enthroned figures, riders, charioteers, and kourotophoi (figures 16.2.12, 16.2.16).

At Mycenae, Prosymna, and other sites on the mainland, archaeological assemblages with figurines show how their owners used them (Tzonou-Herbst 2002, 2003, 2009). Funerary settings indicate that they were appropriate grave offerings for the dead and at the same time used by the living in funerary or memorial ceremonies. The patterns of association of figurine types with burial types are complex. Men, women, and children were buried with them and presumably owned them in life. Poor and wealthy tombs contain them, sometimes in abundance, but interment with figurines was not obligatory for all. The regional inconsistency in burial practices suggests that figurines had different meanings for different people. Additionally, the practice of burial with figurines was introduced at different times. In LH IIIA1, the inhabitants of Mycenae used their figurines at home and threw them in the trash more readily than they put them in their tombs. Later, in LH IIIA2, they offered them to the dead. One can thus discern a change in the significance of figurines or in the ideas about death.

Apart from their use as grave goods, figurines were used in ceremonies honoring the dead. Libations and ritual feasting, along with the offering of figurines, may have been performed in front of the stomion of tombs and in front of monumental walls around ancestral tombs such as the Great Poros Wall at Mycenae and the Kyklos at Peristeria. Figurines, kylikes, and stirrup jars are most frequently associated in those settings.

Incorporation of figurines in burials, in ceremonies to the dead outside the tomb, and in sanctuaries at Mycenae (Moore and Tylour 1999), Tiryns (Kilian 1981), and Phylakopi (Renfrew 1985) leads us to conclude that they were used ritually. They are also found, however, in storage and cooking areas in houses and in household trash. Some reused them as stoppers for vessels or as temper in mud bricks. If some considered their terracottas sacred, others reused them as functional objects, and still others discarded them.

The disposal of figurines shows that a functional transformation occurred during their use lives. Their significance was altered, and after a period of use, Mycenaean threw them out. Alternatively, occurrence in trash may indicate that some Mycenaean believed in them, whereas others did not. Mycenaean may not have shared the same religion or beliefs, and a number of scholars support the idea of different religions for different social groups (Hägg 1981; Wright 1994).

Thus, people of all walks of life used figurines in both sacred and profane settings. Find contexts of the figures, on the other hand, indicate that they were not individual possessions but rather belonged to the community as a whole. Specialists must have manufactured them since they were elaborately made on the wheel.

In contrast to the mass of figurines, few figures have been excavated in ritual architectural settings that share the same features as those at Mycenae, Tiryns, and Phylakopi (figure 16.2.17–18). Additionally, only one was in a grave, and none have been uncovered in houses to date. When their initial purpose was fulfilled, figures were respectfully buried.

Similarly, the Neopalatial faience snake figures were buried beneath the Temple Repositories in the palace at Knossos (figure 16.2.7). Their Postpalatial (LM IIIB–LM IIIC) counterparts are likewise discovered in contexts with repetitive architectural and artifactual features. Large terracotta snake and bird figures with upraised hands are usually found on a bench or in a room with a bench, and other ritual equipment such as kalathoi, with or without snake tubes, and plaques in public town shrines at Gournia, Karphi, Kavousi, Gazi, and Prinias (figure 16.2.19). The variety of settings with figurines shows that their meaningfulness was fluid and flexible, while the figures had a constant significance.

INTERPRETATION AND DISCUSSION

The preceding description of contexts and representations of Bronze Age Aegean figurines generates questions about the function of these objects. Their meaning was discussed as soon as they were discovered at the end of the 19th century.

Typologies and chronologies were attempted early on as well. However, in the 1960s, work by scholars such as French (1961, 1971) and Renfrew (1969) established types and dates used widely today and continues to provide the foundation on which further research is undertaken.

Theories regarding the function and meaning of the figurines to their makers and users cover a wide range of possibilities from the sacred to the mundane. Religious interpretations dominate much of the scholarship. Figurines do not have an obvious function. Because they are not immediately explicable, they are identified with the divine. According to another line of argument, figurines are religious because they have been found in sanctuaries. Consequently, all should be interpreted as religious even when they are not found in religious contexts. However, the argument turns full circle on itself if sanctuaries are characterized or identified because of the figurines in them.

Schliemann and Evans were the instigators of relating Mycenaean and Minoan figurines to religious beliefs and cult practices. Schliemann (1880, 13) regarded them as symbols of the goddess Hera. Evans believed Minoan figurines were images of the 'Mother Goddess.' After a century of research, scholarship still centers on the explanation of the images as goddesses. Dickinson (1994, 169) wrote that "It seems reasonable to suppose that most had some symbolic function in the related spheres of religion, magic and ceremony." Gesell (2004, 143–144) asked, regarding the figures with upraised arms, "The major unanswered question regarding these images is always: are they in fact images of the goddess, and if so, is she one or many? There is of course no answer to this question that will satisfy all. The figures could represent the same goddess, several different goddesses, priestesses representing goddesses, priestesses representing themselves, or worshipers. How can one tell?"

Because figurines are often considered religious, and because religion is viewed by some as a criterion of ethnic and/or cultural identity, scholars cite figurines as evidence for the presence of specific groups of people when found in areas away from their producing centers. Thus, it is debated whether EC figurines found in Crete show that immigrants from the Cyclades used them (Doumas 1976; Sakellarakis 1977). The presumed relationship of figurines to Mycenaean religion and cult practices makes them an appropriate symbol of Mycenaean identity. They "constitute expression of a religious ideology, which contributes to the reconnaissance of ethnic identity" (Pilali-Papasteriou 1998, 29). Niemeier (1997, 347) and Barber (1999, 315) substantiated the Mycenaean presence at Miletus and Phylakopi, respectively, based on figurines. Boulotis (1997, 267) believed that figurines reveal the identity of their owners, as "carriers of deeply rooted religious beliefs."

Interpretations deriving from ideas such as religion or identity focus on a priori assumptions. It is taken for granted that the figurines were religious, and thus the question becomes which deity was represented or whether the figurines depicted the deities or the worshippers. The religious meaning becomes universally accepted, and meanings associated with other intangible spheres, such as identity, are proposed.

In addition to interpretations that relate figurines to abstract concepts, more mundane readings have been put forth. One of them is that figurines were toys or educational aids. Blegen (1937) suggested that Mycenaean figurines were toys because they were associated with tomb burials of children at Prosymna. Another theory is that EC figurines may have been educational aids used to instruct about the female body and the customs of the society. Horizontal parallel incised lines at the abdomen are seen as postpartum lines (Renfrew 1969, 18; Getz-Gentle 2001, 10). The red striations painted on the cheeks of a number of them may represent the bloody lines scratched by women as part of mourning (Hoffman 2002).

Meanings derive not only from analysis of the figurines' inherent features but also from contextual associations of artifact assemblages and architectural settings. Without contexts, interpretation is difficult. The praise of EC figurines as art pieces led to illicit digging and dealings with museums and collectors throughout the world. Lacking archaeological information, research concentrated on features of the figurines themselves to get to information about their producers. Getz-Gentle defined sculptural hands (1987, 2001), but a number of scholars question the usefulness of such attributions since they do not relate to real people and places (Renfrew 1991, 137–41; Cherry 1992; Gill and Chippindale 1993; Davis 2001, 24).

To reconstruct the activities in which owners used their figurines in the past, scholarship in the 1990s focused on the facts of recovery (Conkey and Tringham 1995). Scholars proposed hypotheses based on patterns of deposition, the archaeological contexts of the objects. An example of the application of information from archaeological context in interpretation is given earlier in the chapter in the reading of Mycenaean figures and figurines. The find contexts show that figurines had a varied existence. They were not religious objects for all people at all times. Some considered them religious especially if or when they had been made efficacious through ritual. Others recycled, reused, and threw them in the trash. Figures, on the other hand, were used in specific activities in certain spaces. When their use was deemed to have ended, they were ritually buried and sealed. Mycenaean would not have considered throwing them away in their trash, as they did with the figurines.

CONCLUSIONS

The variety of types of figurines and contexts in which they have been found in the Aegean throughout the Bronze Age cannot all be explained by religion. Alternative interpretations and functions must be sought. To be able to produce these, we need to record the location and number of found figurines, the other objects they are found with, their depositional histories, how they were made and later broken, the history of their existence, and their use life from the moment they were formed, through the many uses and reuses, to their recycling and eventual discard. We can then infer the lifestyle of figurine owners.

Multiple interpretations of the figurines exist both because their meaning or meaningfulness is fluid and variable and because archaeologists construct those interpretations, which reflect their readings of the sociocultural environment that created the figurines. Archaeologists produce meanings according to their own perceptions and interests. In answer to Renfrew's worry that we will probably never know why figurines were produced, Hourmouziadis (2007, 58) replies that he is not interested in knowing why figurines were meaningful to their owners; rather, he is excited about hypothesizing the reasons he, the archaeologist, believes they were produced.

Inevitably, archaeological interpretation consists of facts, but it also depends on the imagination and speculation of the archaeologist. The multiple interpretations produced for figurines demonstrate that. Figurines are enigmatic and will continue to puzzle us. They have their own idiosyncratic characteristics since they are creations of landscapes, times, and people that no longer exist. We attempt to revive their worldview, thoughts, and perceptions as they portrayed them in these objects.

BIBLIOGRAPHY

- Andrikou, Eleni. 1998. "An Early Helladic Figurine from Thebes, Boeotia." *BSA* 93: 103–106.
- Barber, Robin L. N. 1999. "Μυκηναίοι στη Φυλακωπή," In *Η Περιφέρεια του Μυκηναϊκού Κόσμου. Α' Διεθνές Διεπιστημονικό Συμπόσιο, Λαμία, 25–29 Σεπτεμβρίου 1994*, ed. Fanouria Dakoronia, 315–20. Lamia: Ministry of Culture, 14th Ephoreia of Prehistoric and Classical Antiquities.
- Blegen, Carl W. 1937. *Prosymna: The Helladic Settlement Preceding the Argive Heraeum*. London: Cambridge University Press.
- Boulotis, Christos. 1997. "Κουκονήσι Λήμνου, Τέσσερα Χρόνια Ανασκαφικής Έρευνας: Θέσεις και Υποθέσεις," In *Poliochni*, 230–72.
- Branigan, Keith. 1971. "Cycladic Figurines and Their Derivatives in Crete." *BSA* 66: 57–78.
- Cherry, John F. 1992. "Beazley in the Bronze Age? Reflections on Attribution Studies in Aegean Prehistory." In *EIKON*, 123–44.
- Conkey, Margaret W., and Ruth E. Tringham. 1995. "Archaeology and the Goddess: Exploring the Contours of Feminist Archaeology." In *Feminisms in the Academy*, eds. Domna C. Stanton and Abigail J. Stewart, 199–247. Ann Arbor: University of Michigan Press.
- Davis, Jack L. 1984. "A Cycladic Figure in Chicago and the Non-funereal Use of Cycladic Marble Figures." In *Cycladica: Studies in Memory of N. P. Goulandris*, ed. J. Lesley Fitton, 15–23. London: British Museum Press.
- . 2001. "Review of Aegean Prehistory I: The Islands of the Aegean." In *Aegean Prehistory*, 19–76.
- Dickinson, Oliver. 1994. *The Aegean Bronze Age*. New York: Cambridge University Press.
- Doumas, Christos G. 1976. "Προϊστορικοί Κυκλαδίτες στην Κρήτη." *Athens Annals of Archaeology* 12: 104–109.
- French, Elizabeth B. 1961. *The Development of Mycenaean Terracotta Figurines with Special Reference to Unpublished Material from Mycenae*. PhD diss., University of London.
- . 1971. "The Development of Mycenaean Terracotta Figurines." *BSA* 66: 102–87.
- Gesell, Geraldine C. 1985. *Town, Palace, and House Cult in Minoan Crete. SIMA 67*. Gothenburg: Åström.
- . 2004. "From Knossos to Kavousi: The Popularizing of the Minoan Palace Goddess." In *XAPIΣ*, 131–50.
- Getz-Gentle, Pat. 1987. *Sculptors of the Cyclades: Individual and Tradition in the Third Millennium B.C.* Ann Arbor: University of Michigan Press—J. Paul Getty Trust.
- . 2001. *Personal Styles in Early Cycladic Sculpture*. Madison: University of Wisconsin Press.
- Gill, David W. J., and Christopher Chippindale. 1993. "Material and Intellectual Consequences of Esteem for Cycladic Figures." *AJA* 97(4): 601–59.
- Hägg, Robin. 1981. "Official and Popular Cults in Mycenaean Greece." In *Sanctuaries and Cults*, 35–40.
- Hallager, Erik. 2001. "A Waste Deposit from an LBA Shrine in Khandia (?)" In *Potnia*, 175–80.
- Hendrix, Elizabeth A. 2003. "Painted Early Cycladic Figures: An Exploration of Context and Meaning." *Hesperia* 72(4): 405–46.
- Hitchcock, Louise A. 1997. "Engendering Domination: A Structural and Contextual Analysis of Minoan Neopalatial Bronze Figurines." In *Invisible People and Processes: Writing Gender and Childhood into European Archaeology*, eds. Jenny Moore and Eleanor Scott, 113–30. New York: Leicester University Press.
- Hoffman, Gail L. 2002. "Painted Ladies: Early Cycladic II Mourning Figures?" *AJA* 106(4): 525–50.
- Hourmouziadis, Giorgios H. 2007. "Η Μικρογραφία του Δισπηλιού ή με Αφορμή τα Ειδώλια Ενός Λιμναίου Οικισμού." *Εγνατία* 11: 51–71.
- Kilian, Klaus. 1981. "Zeugnisse mykenischer Kultausbung in Tiryns." In *Sanctuaries and Cults*, 49–58.
- Moore, Andrew D., and William D. Taylour. 1999. *The Temple Complex: Well-built Mycenae*. Fascicle 10 of *The Helleno-British Excavations within the Citadel at Mycenae, 1959–1969*, eds. William D. Taylour, Elizabeth B. French, and Ken A. Wardle. Oxford: Oxbow.
- Niemeier, Wolf-Dietrich. 1997. "The Mycenaean Potters' Quarter at Miletus." In *TEXNH*, 347–52.
- Phelps, William W. 1987. "Prehistoric Figurines from Corinth." *Hesperia* 56: 233–53.
- Pilali-Papasteriou, A. 1998. "Idéologie et commerce: Le cas des figurines mycéniennes." *BCH* 122(1), Études: 27–52.
- Pullen, Daniel J. 1992. "Ox and Plow in the Early Bronze Age Aegean." *AJA* 96(1): 45–54.
- Renfrew, Colin. 1969. "The Development and Chronology of the Early Cycladic Figurines." *AJA* 73(1): 1–32.
- . 1984. "Speculations in the Use of Early Cycladic Sculpture." In *Cycladica: Studies in Memory of N. P. Goulandris*, ed. J. Lesley Fitton, 24–30. London: British Museum Press.
- . 1985. *The Archaeology of Cult: The Sanctuary at Phylakopi*. BSA Suppl. 18. London: British School at Athens.
- . 1991. *The Cycladic Spirit: Masterpieces from the Nicholas P. Goulandris Collection*. New York: Harry N. Abrams.
- . 2003. *Figuring It Out: What Are We? Where Do We Come From? The Parallel Visions of Artists and Archaeologists*. London: Thames and Hudson.
- . 2006. "Dhaskalio Kavos (Keros): Reflections and a Question." In *Γενέθλιον. Αναμνηστικός Τόμος για τη Συμπλήρωση Είκοσι Χρόνων Λειτουργίας του Μουσείου*

- Κυκλαδικής Τέχνης*, ed. Nikolaos Chr. Stampolides, 25–34. Athens: Goulandris Foundation–Museum of Cycladic Art.
- Rethemiotakis, Giorgos. 1998. *Ανθρωπόμορφη Πηλοπλαστική στην Κρήτη από τη Νεοανακτορική έως την Υπομινωική Περίοδο*. Athens: Archaeological Society.
- Sakellarakis, Ioannis. 1977. “Τα Κυκλαδικά Στοιχεία των Αρχαίων.” *Athens Annals of Archaeology* 10: 93–115.
- Schliemann, Heinrich. 1880. *Mycenae: A Narrative of Researches and Discoveries at Mycenae and Tiryns*. New York: Scribner’s.
- Sotirakopoulou, Panayiota. 1998. “The Early Bronze Age Stone Figurines from Akrotiri on Thera and Their Significance for the Early Cycladic Settlement.” *BSA* 93: 107–65.
- Sotirakopoulou, Peggy. 2005. *The “Keros Hoard”: Myth or Reality? Searching for the Lost Pieces of a Puzzle*. Athens: Goulandris Foundation–Museum of Cycladic Art.
- . 2008. “The Keros Hoard: Some Further Discussion.” *AJA* 112(2): 279–94.
- Tsountas, Christos. 1899. “Κυκλαδικά II.” *ArchEph*: 73–134.
- Tzavella-Evjen, Hara. 1985. *Lithares, an Early Bronze Age Settlement in Boeotia*. Los Angeles: Institute of Archaeology, University of California.
- Tzonou-Herbst, Ioulia N. 2002. *A Contextual Analysis of Mycenaean Terracotta Figurines*. PhD diss., University of Cincinnati.
- . 2003. “Η Πολυσημία των Μυκηναϊκών Ειδωλίων.” In *ΑΡΓΟΝΑΥΤΗΣ: Τιμητικός Τόμος για τον Καθηγητή Χρίστο Γ. Ντούμα από τους Μαθητές του στο Πανεπιστήμιο Αθηνών (1980–2000)*, eds. Andreas Vlachopoulos and Kiki Birtacha, 645–64. Athens: H Kathimerini.
- . 2009. “Trashing the Sacred: The Use-life of Mycenaean Figurines.” In *Encounters with Mycenaean Figurines*, eds. Anne-Louise Schallin and Petra Pakkanen. Athens: Swedish Institute.
- Warren, Peter. 1972. *Myrtos: An Early Bronze Age Settlement in Crete*. London: British School of Archaeology at Athens.
- Watrous, L. Vance. 1995. “Some Observations on Minoan Peak Sanctuaries.” In *Politeia*, 393–403.
- Wright, James C. 1994. “The Spatial Configuration of Belief: The Archaeology of Mycenaean Religion.” In *Placing the Gods: Sanctuaries and Sacred Space in Ancient Greece*, eds. Susan E. Alcock and Robin Osborne, 37–78. Oxford: Clarendon.

CHAPTER 17

FRESCOES

ANNE P. CHAPIN

PICTORIAL painting in fresco is a defining characteristic of Aegean material culture, yet the art form presents numerous challenges to modern study. Prehistoric frescoes are durable but fragile, and as little as 5–10% of any given composition may survive to the present day. Attempts to restore the original appearance of such fragmentary paintings often result in errors or overly imaginative reconstructions.

Dating frescoes to specific phases of prehistory is also difficult. Prehistoric buildings typically have complex architectural histories marked by frequent remodeling and repair. Fresco fragments are often found in secondary contexts (e.g., dumps, or reused as fill material), and mixed stratigraphy and/or scant documentation of excavations often obscure the dating of surviving frescoes.

In addition, the anonymity of the art form and an incomplete understanding of its stylistic development complicate both individual and collective study. In the absence of written history, however, the pictorial imagery preserved on frescoes provides crucial information about the social practices and beliefs of the prehistoric Minoan, Cycladic, and Mycenaean populations of the Aegean. This brief summary of Aegean wall painting focuses on recent scholarship; detailed discussion of individual frescoes, together with earlier relevant bibliography, can be found in Immerwahr (1990).

THE RISE OF PICTORIAL PAINTING

Painted in true (*buon*) fresco on wet lime plaster (though there is also evidence for painting on dry surfaces [*fresco secco*]), Aegean frescoes are technically distinct from Egyptian paintings made directly on limestone or dry gypsum plaster

(Jones 2005, 217–22). The origins of Aegean fresco painting can be found on FN and EM Crete, where the floors and walls of important buildings were coated in plaster made of lime mixed with clay and colored monochrome red (sometimes black).

With the construction of the first Minoan palaces on Crete came technical advances in fresco, including the introduction of a high-purity lime plaster and improved pigments. Early frescoes from Phaistos, Knossos, and Kommos demonstrate that MM II artists created abstract designs and imitations of stonework (Blakolmer 1997; Militello 2001, 45–46; Hood 2005, 48–49; Shaw and Shaw 2006, 182, 224–25).

Pictorial painting first appears in MM IIIA at Knossos. Preferred subjects were drawn from nature and include bulls and (reportedly) a human figure in relief, as well as spirals (Knossos palace: Hood 2005, 49, 76–78), various plants and a foliate lily band (Royal Road, Knossos: Cameron 1974, 725–26), and abstract plants (Galatas palace: Rethemiotakis 2002, 57, pl. XVIa). Stylistic comparanda also suggest an MM IIIA date for the Saffron Gatherer Fresco from Knossos (Walberg 1986, 58–62; Hood 2005, 49–50, 62). The motivations for adopting figural painting remain unknown, but Minoan rulers, patrons, and artists were probably influenced by the monumental artistic traditions of Egypt and the Near East. Small-scale pictorial imagery already present in Minoan seal decoration and ceramics, together with foreign models, could have provided the basis for the development of Minoan monumental painting (Immerwahr 1990, 21–37). Middle Cycladic bichrome pictorial vase painting may also have played a role.

NEOPALATIAL PAINTING ON MINOAN CRETE

Knossos remained a center of artistic production throughout the Neopalatial era (MM III–LM I). The palace was heavily frescoed after a late MM IIIB earthquake (Evans's "Great Restoration"), as were many houses situated near the palace. Structures built across Crete, including those at Amnisos, Archanes, Ayia Triada, Chania, Epáno Zakros, Kommos, Palaikastro, Pseira, and Tylissos, received fresco decoration. Interestingly, the other palatial centers of Phaistos, Malia, Kato Zakros, and Galatas received comparatively little pictorial painting.

Minoan frescoes were distributed across wall surfaces in three decorative zones: an upper level above windows and doorways for border designs (bands, spirals, etc.) and pictorial friezes, the main wall surface for large compositions, and a dado at floor level, often painted with imitations of stonework (Evely 1999, 68–69, 133–35). Pictorial subjects range in scale from miniature (figure height: 6–10 cms.) to life sized. Ceiling and floor frescoes are also known, but the suggestion that the Dolphin Fresco from Knossos was a floor fresco cannot be confirmed (Hirsch 1977; Hood 1978, 71, 76–77; Koehl 1986b).

Most frescoes were painted on flat surfaces, but relief frescoes were sculptural in conception. Figures modeled in plaster relief receive careful attention to anatomical detail. The Aegean palette featured blues from Egyptian blue (synthesized from copper compounds), glaucophane, and riebeckite; reds, browns, oranges, and yellows from haematite, iron oxides, and ochres; white from lime; and black from charcoal/carbon (Jones 2005). Greens, pinks, and grays were achieved by mixing pigments, but *chiaroscuro* (shading in light and dark) was virtually unknown.

Frescoes from Knossos

Ongoing efforts to clarify the architectural history of Knossos offer hope for achieving a better understanding of the palace's pictorial program in its Neopalatial phase (excluding compositions from its final phase of Mycenaean occupation). A principal assumption is that the program served the prevailing ideology of the ruling elite, even though the rulers' identities remain unknown. Additionally, certain frescoes appear to have served as "signposts" marking important spaces and indicating how they were used (e.g., painting corridors and stairways with procession frescoes).

At Knossos, north and west palace entrances displayed bull/taureador frescoes. Stucco reliefs of athletes (perhaps boxers or taureadors) from the restored East Hall underscore a palatial interest in athletes and athletic competition. Large-scale relief fragments of female breasts and leashed griffins allude to imagery better preserved at Xeste 3 in Akrotiri, Thera (discussed later). Women are prominent in an early Procession Fresco, in the "Ladies in Blue" and the "Lady in Red" Frescoes, and in two miniature frescoes, the Grandstand Fresco and the Sacred Grove and Dance Fresco. These miniature compositions depict elite women, large crowds, and palatial settings. Together they emphasize Minoan social relations and the likely priorities of the Neopalatial rulers (i.e., elite display, public performance, and communal identity).

These Knossos frescoes illustrate the Aegean color convention borrowed from Egyptian art in which male figures have red skin tones and women are painted white. The famous Priest-King Fresco from Knossos, however, preserves ambiguous "rosy" skin surfaces that are neither red nor white (figure 17.1). This has prompted the suggestion that the figure represents a female athlete, perhaps a bull leaper (Cameron 1974, 122), even though the figure's powerful upper body and lack of breast development appear male. Suggestions that the fragments that constitute the Priest-King Fresco actually represent a boxer (Coulomb 1979) or a deity (Niemeier 1987) facing right are now disproved (M. Shaw 2004).

Landscapes

Minoan landscapes rank among the first in the world to portray plants and animals in their natural environments without human presence. Vibrant rocky terrain, lively flora and fauna, and unusual spatial conventions characterize the best-preserved landscapes, including the Monkeys and Birds Fresco from the House of the Frescoes,



Figure 17.1. The Priest-King Fresco from Knossos, Crete. Neopalatial, LM I (photograph courtesy of the author).

the Partridge and Hoopoe Fresco from the Caravanserai, and the Floral Fresco from the Unexplored Mansion, all at Knossos (Chapin 1997; M. Shaw 2005). Landscape frescoes often extend across the walls of a room, ignoring corners and surrounding the viewer with idealized depictions of plants and animals. Some species can be identified, but artistic hybrids create new motifs, and flowers of all seasons bloom profusely and simultaneously, contrary to nature. The popularity of landscape as room decoration in elite estates suggests their importance in social display, while their latent religious symbolism implies that landscape painting visualized essential Minoan religious beliefs (Chapin 2004).

Female Figures

Large-scale frescoes of female figures (many in relief) decorated numerous, well-appointed buildings in Minoan towns across Crete (e.g., Archanes, Chania, Katsamba, Palaikastro, Pseira). The best preserved come from the villa at Ayia Triada, where two women are painted in a lush landscape. One kneels

over sacred baetyls, and the other stands beside a stepped structure similar to platforms used as seats for presumably divine female figures in other media. The Ayia Triada fresco may therefore depict a goddess (or a goddess impersonator) and her votary (Militello 1998, 250–82). Without inscriptions, distinctive costumes, or identifying attributes, however, it remains difficult to differentiate divine personages from those with priestly status in Minoan art. This ambiguous iconography permeates other frescoes with large-scale female figures and may intentionally blur the boundaries between mortal and divine.

CYCLADIC PAINTING IN THE NEOPALATIAL PERIOD: AKROTIRI, THERA

Minoan culture influenced prehistoric sites throughout the Aegean, and the Cycladic town of Akrotiri on Thera, the island closest to Crete, preserves the strength of this influence. The LC I eruption of the Santorini volcano buried the town and protected its many frescoes to a degree not found elsewhere in the Aegean.

Xeste 3

Images of women dominate the extensive fresco program of Xeste 3, a large villalike structure built with *polythyra* and a lustral basin (Doumas 1992, 127–31, pls. 93–137; Vlachopoulos 2008). The programmatic focus is a fresco of a seated goddess attended by a leashed griffin. Associated frescoes depict pubertal girls collecting an offering of saffron (an initiation rite?) and young women of marriageable age together with a painted shrine (Marinatos 1984, 61–84; Davis 1986; Rehak 1999; Chapin 2002). Associated nature frescoes identify the goddess as a *potnia theron*, a mistress of animals. A procession of mature women imparts a multigenerational aspect to communal participation. A secondary programmatic focus on boys and men emerges in space 3b, painted with three youths and an adult male, and in newly restored scenes of bull catching and goat leaping painted at the building's entrance. Large, complex spiral compositions decorated the uppermost level of Xeste 3. Crocuses were painted with organic purple pigment from murex mollusks (Chrysikopoulou 2005).

The West House

A fresco program linked by maritime themes and the predominance of men decorated Rooms 4 and 5 of the West House (Doumas 1992, 45–49, pls. 14–64). A miniature frieze depicted coastal towns, a ship procession, a sea raid, a Nilotic landscape, and other scenes (Televantou 1990, 1994). The fresco's imagery compares closely to the themes, formulae, and episodes of Homeric epic and may be inspired by a lost poetic source (Morris 1989; Hiller 1990; Watrous 2007). Alternatively, the ship

procession could celebrate a seasonal nautical festival (Morgan 1988). The West House also preserves frescoes of adolescent boys holding lines of fish, a youthful "Priestess," *ikria* (sea captain's cabins), and cut lilies.

Other Frescoes

Every house thus far excavated at Akrotiri has produced pictorial frescoes, demonstrating that the art form was not restricted to elite structures. The Spring Fresco from Building Delta is famous for its brightly colored landscape with swaying lilies and darting swallows painted calligraphically in foreshortened views (Doumas 1992, pls. 66–76). The House of the Ladies preserves frescoes of sea daffodils and women engaged in a costuming ceremony (Marinatos 1984, 97–105; Peterson Murray 2004). Xeste 4 has a male procession fresco in a staircase (Doumas 1992, pls. 138–41) and a frieze of boar's tusk helmets, an emblem of prestige often associated with Mycenaean culture (Akrivaki 2003). Athletic training figures prominently in the Boxing Boys and Antelopes Fresco from Building Beta (Doumas 1992, pls. 79–84). From the Porter's Lodge, a female figure with a yellow face (Vlachopoulos 2007, 135, pl. 15.16) preserves a clear departure from the usual red-and-white color convention used by Aegean artists but recalls numerous depictions of Egyptian women in New Kingdom painting. Studies of painting technique reveal that the flowing lines of some figural and spiral frescoes were painted with the aid of mechanical devices (Birtacha and Zacharioudakis 2000; Papaodysseus et al. 2006a, 2006b).

Images of Children

More images of children and adolescents have been found at Akrotiri than any other Aegean site. Many seem engaged in ritual activities, perhaps of initiation. Attempts to sort them into age grades, primarily by analyzing hairstyles, have failed to produce consensus (e.g., E. Davis 1986; Koehl 1986a), but recent studies of figural proportion show that Thera artists followed a grid system based on the Egyptian canon and adjusted it for individual figures (Guralnik 2000). This flexibility allowed artists to portray the changing figural proportions of youthful growth and development, so that the Akrotiri frescoes figure among the world's earliest naturalistic images of children (Chapin 2007).

NEOPALATIAL FRESCOES FROM OTHER ISLANDS

Contemporary frescoes from Melos, Keos, and Rhodes are also closely related to Neopalatial Minoan painting. From Phylakopi on Melos come frescoes of female figures, a monkey, lilies, and flying fish (Morgan 1990). House A from Ayia Irini on Keos yielded griffin fragments and a frieze of blue doves (E. Davis 2007); Area M produced a miniature frieze similar to that of the West House of Akrotiri

(Morgan 1998). Evidence for a Cycladic school of painting includes shared thematic interests, a stylistic preference for thin washes of paint, and figures painted on white plaster grounds (Davis 1990; Morgan 1990). Yet recent identification of distinctive splash-pattern frescoes at Knossos and Petras (Crete), Ayia Irini (Keos), and Trianda (Rhodes) offer intriguing evidence for traveling artists (Davis 2007; see also Boulotis 2000). It may be premature to identify regional schools of painting in an anonymous art form with mobile workshops.

AEGEAN ARTISTS ABROAD

Aegean-style frescoes (painted on wet plaster) have been identified at a growing number of Near Eastern and Egyptian sites. The palace of Yarim-Lim at Alalakh (Level VII) has produced fragments of painted dados, reeds, a bull's horn, and a griffin fresco of Aegean type (Niemeier and Niemeier 2000). A painted plaster floor and a miniature fresco resembling that of the West House at Akrotiri, Thera, was found at the Canaanite palace at Tell Kabri (Niemeier and Niemeier 2002), and fresco fragments preserving Aegean-style motifs, including spirals, rockwork, palm trees, and watery scenes with crabs and turtles, were discovered at the Royal Palace at Qatna in Syria (Pfälzner 2008).

From Tell el-Dab'a (ancient Avaris), Egypt, come frescoes dating to the early 18th Dynasty that were painted with Aegean motifs, including acrobats, Aegean-style griffins, and rocky landscapes (Bietak and Marinatos 1995). An intriguing Bull and Maze Fresco depicts Minoan-style bull leaping in a setting of undulating bands, a maze pattern, and a half-rosette frieze (Bietak, Marinatos, and Palyvou 2007). The partially shaved scalp of one leaper recalls Thera hairstyles, and his yellowish skin color is notable. Technical and stylistic features demonstrate the Aegean character of the Tell el-Dab'a paintings, but whether they were painted by artists of Minoan nationality, as has been suggested, remains difficult to prove.

FRESCOES FROM MYCENAEAN CRETE, LM II–III A

Mycenaean Greeks ruled Crete after the LM IB collapse of Neopalatial Minoan society, but the Knossos palace remained an important center of power with a significant fresco program. The Procession Fresco, the Taureador Fresco, the griffins (wingless, as at Pylos) of the Throne Room, and several bull frescoes all reproduce earlier Minoan themes. Martial subjects associated with Mycenaean culture appear in the Shield and Palanquin-Charioteer Frescoes. The Camp Stool

Fresco features pairs of men raising Mycenaean kylikes and Minoan chalices in a possible drinking ceremony. The appearance of registers, monochromatic grounds, and repeated pictorial motifs may reflect renewed artistic influence from Egypt, while human figures become simpler and more schematic, often outlined in black. These stylistic features are also found in the LM IIIA frescoes and painted sarcophagus of Ayia Triada (Militello 1998, 132–48, 154–67, 283–320) and develop further in later Mycenaean painting. The growing figural abstraction also undermines the legibility of the Aegean color convention. The Taureador Fresco, subject of much recent investigation (e.g., Damiani-Indelicato 1988; Marinatos 1993, 219–20; Morgan 2000, 939–40), preserves such schematic figural proportions that sex, gender, and age-grade distinctions become difficult to read (Alberti 2002, 109–15; Chapin 2007, 231–32).

MYCENAEAN FRESCOES FROM THE GREEK MAINLAND

Evidence for early Mycenaean fresco painting remains scarce. Tiryns yielded MH monochrome plasters painted in various colors and fresco fragments (unpublished) from LH II contexts (Müller 1930, 178; Kilian 1987, 213). Fragments painted with plant motifs were found at Mycenae under the East Lobby floor in LH IIA contexts and demonstrate that at least one Mycenaean building contemporary with Neopalatial Crete was decorated with pictorial frescoes (Wace 1923, 155–59, pl. 25b.1–2). Fragments from Mycenae or Tiryns (now lost) also demonstrate knowledge of the relief technique (Immerwahr 1990, 194; see also Blakolmer 2000, 401).

Fresco painting became more widespread in LH IIIA, though frescoes of this period are seldom found in sealed, stratified deposits and are often difficult to date. Based on stratigraphical and stylistic criteria, the Theban female Procession Fresco is likely the earliest rendition of this favorite Mycenaean theme, with other processions known from Mycenae, Tiryns, and Pylos. These compositions seem to represent a continuation of Neopalatial subject, costuming, and ritual action, though figures are rendered more schematically. Bull leaping is represented by a fragment from Pylos and a fresco from the Ramp House Deposit at Mycenae (M. Shaw 1996). Whether Mycenaean engaged in bull leaping remains uncertain (many scholars are doubtful), but taureador imagery virtually disappears from Mycenaean iconography after the final destruction of Knossos in LM IIIA or early IIIB.

Most of the surviving Mycenaean frescoes date from LH IIIB, when wall paintings decorated palaces, houses, and many other types of buildings. Technical evidence suggests that artists of the Mycenaean era continued earlier painting practices. As before, walls were organized into decorative zones for dados,

pictorial scenes, and decorative friezes. At Pylos, decorative and figurative friezes are sometimes stacked in registers, one atop the next, in Egyptian fashion (e.g., the frescoes of Hall 64). Some compositions are so repetitive that they resemble modern wallpaper. Rare pigments include lapis lazuli (Gla, the Ayia Triada sarcophagus), the organic dye indigo (Thebes), and malachite (Shield Fresco, Tiryns) (Brysaert and Vandenaebale 2004; Jones 2005, 216; Brysaert 2006). Relief fresco disappears, but the Mycenaean adopted their own “miniature” painting style with figures larger than those of Neopalatial miniature frescoes and even painted some frescoes in sepia, without color. Floor frescoes painted with grid patterns are known from the megarons of Mycenae, Tiryns, and Pylos (Hirsch 1977).

The pictorial programs of Mycenaean palaces are best preserved at Pylos, where the ritual focus of the main megaron frescoes is balanced by battle scenes in Hall 64. From Linear B evidence, it has been suggested that these chambers functioned as seats of authority for the *wanax* (king) and the *lawagetas* (“leader of the people,” perhaps a military leader) (Killen 1994; Davis and Bennet 1999, 116). Recent investigations confirm a lack of evidence for the antithetical arrangement of lions and griffins about the Pylos throne, as suggested by Piet de Jong’s widely reproduced drawing (McCallum 1987; Shank 2007), though lions and griffins are abundant in Hall 46.

Frescoes from the palace at Mycenae preserve martial themes with horses, chariots, and warriors. A fragmentary scene depicting a Mycenaean warrior falling before an Aegean city found in the megaron suggests epic inspiration, while the Boar Hunt Fresco from Tiryns depicts a favorite sport of the Mycenaean elite (figure 17.2). Women driving chariots, huntsmen leading hounds, and spearmen closing in for the kill all seem to proclaim the ability of the Mycenaean ruling class to protect the land and its people from the forces of chaos represented by the highly destructive and dangerous wild boar. Stylistically this fresco represents a Mycenaean interest in stylized abstraction at the expense of naturalism. The celebration of nature that characterized Neopalatial Minoan painting is gone. The discovery of a nearly identical boar hunt fresco from Orchomenos further suggests traveling workshops or the use of pattern books.

Religious imagery is preserved most frequently at Mycenae. In addition to the lovely “Mykenia,” for whom a divine identity has been suggested but not confirmed, there is the important and unique fresco composition from Room 31 (the Room of the Frescoes) that depicts three female figures and an altar painted with horns of consecration. Position and scale identify the two larger female figures as divinities, and each one is distinguished by costume and attribute (sword and staff). However, they lack identifying inscriptions and thus remain anonymous. Between them, two small and crudely painted figures with outstretched arms may represent souls or votaries. The third female figure raises sheaths of grain before the altar in an offertory gesture. Her mantled costume, plumed hat, and seal stone are distinctive, and she is smaller in scale than the presumed divinities. Beside her a guardian animal is preserved only by its yellow paws and

- Voutsaki, Sophia. In press. "From Kinship Economy to Prestige Economy." In *Political Economies of the Aegean Bronze Age*, ed. Daniel J. Pullen. Oxford: Oxbow.
- Wright, James C. 1994. "The Spatial Configuration of Belief: The Archaeology of Mycenaean Religion." In *Placing the Gods: Sanctuaries and Sacred Space in Ancient Greece*, ed. Susan Alcock and Robin Osborne, 37–78. Oxford: Clarendon.
- . ed. 2004. *The Mycenaean Feast*. *Hesperia* 73(2). Princeton: American School of Classical Studies at Athens.
- . 2006. "The Formation of the Mycenaean Palace." In *Ancient Greece: From the Mycenaean Palaces to the Age of Homer*, ed. Sigrid Deger-Jalkotzy and Irene S. Lemos, 7–52. Edinburgh Leventis Studies 3. Edinburgh: Edinburgh University Press.
- . 2008. "Chamber Tombs, Family, and State in Mycenaean Greece." In *DIOSKOUROI: Studies Presented to W. G. Cavanagh and C. B. Mee on the Anniversary of their 30-year Joint Contribution to Aegean Archaeology, BAR-IS 1889*, ed. Chrysanthi Gallou, Mercouris Georgiadis, and Gina M. Muskett, 144–153. Oxford: Archaeopress.

CHAPTER 19

MINOAN RELIGION

SUSAN LUPACK

THE FOUNDATIONS OF MINOAN RELIGION

Minoan religion appears to have had its foundations in rituals associated with funerary rites. Starting in the EM I period, the Minoans of south central Crete built tholos tombs, and in the EM II period, rectangular house tombs appeared in north central and east Crete (Branigan 1970, 1988; Soles 1992). In the EM II period, rooms located either within the tombs or before their entrances were used for ritual activities that were not associated with rites performed for the dead. Several sites had niches, altars, bench shrines, and paved courtyards.

The fact that the rituals performed at the tombs were being taken beyond simple funerary rites is indicated by some of their finds (Branigan 1998, 22; Soles 1992, 226–36), which included offering tables, triton shells, clay phalli, cups with molded breasts, anthropomorphic and zoomorphic figurines and rhyta, some in the form of bulls, and bronze double axes. Branigan (1993, 133) suggests that bulls and perhaps bull sacrifices were part of the ceremonies. Certainly the cult was concerned with human fertility and the seasonal cycle. A series of female figurines who either carried a vessel or whose breasts were pierced so that they could function as rhyta supports the idea that fertility was a major concern of early Minoan cult. One figurine from Koumasa, ca. 2000 BC, has a snake wound around her shoulders and may be an early Snake Goddess (Gesell 1983). These figurines were found not only in the tombs but also in caves and at the settlement shrine of Myrtos (Warren 1972).

PEAK SANCTUARIES

The shrines situated on mountains, called peak sanctuaries, are a distinctive feature of Minoan religion. Peak sanctuaries were not always located on the highest point of a mountain. Rather, as Peatfield (1983, 275) points out, it was more important “that the sanctuary should be seen from the region it served, and also that it should ‘see’ that region.” Thus, peak sanctuaries were “topographic and religious focal points for groups of settlements” (Peatfield 1987, 90).

The peak sanctuary of Knossos on Mount Jouktas dates to the EM II period (Karetsoy 1981, 1987), but generally they appear in the EM III/MM I periods and flourish throughout the Protopalatial period, at which time there were approximately twenty-five sites (Peatfield 1994a). In the Neopalatial period that number is reduced to a mere eight.

The most common finds are clay figurines, which appear in the form of animals, human votaries (who “seem to memorialise the action of peak sanctuary ritual itself” Peatfield [1994b]), and parts of the human body, such as feet, eyes, and genitalia. These votives reflect the concerns of the worshippers—their own fertility and well-being and that of their animals. Richer peak sanctuaries have stone vessels, Linear A inscriptions, jewelry, seals, bronze blades, figurines, and double axes. The more costly finds were found at a limited number of sites and generally date to the Neopalatial period. The ritual focus of the shrine may consist of a flat rock, a cairn of stones, and/or (Nowicki 1994) concentrations of white pebbles. Actual architectural remains appear at only nine sites, eight of which were those that continued into the Neopalatial period (Peatfield 1994a). Jouktas is exceptional in that it had a built altar, three terraces, and a multiroomed cult building.

The inspiration for the foundation of the peak sanctuaries has been debated. Rutkowski (1972, 185) says that the “peak sanctuaries came into existence mainly to relieve the fears and cares of the shepherds and cattle breeders.” Peatfield (1983) agrees, pointing to the vast numbers of domestic farm animal figurines. Cherry (1978, 1986) has proposed that the peak sanctuaries were established by the emerging elite of the palaces to support their newly founded control over Minoan society, while Watrous (1987, 1995) has proposed that the establishment of the peak sanctuaries was part of a larger cultural change that was influenced by the Near Eastern and Egyptian cultures.

Peatfield, who sees peak sanctuaries as having developed naturally from tomb cult, believes that Watrous has overplayed the Eastern influence and discounts Cherry’s specific proposal because it is now recognized that no chronological link exists between the emergence of the elite and the first appearance of the peak sanctuaries. Nonetheless, Peatfield (1990, 130) and Kyriakidis (2005, 124–27) believe that the palatial elite of the Neopalatial period appropriated the already established cult of the peak sanctuaries to “maintain its hierarchical position” by taking on the “social prestige” associated with the Mountain Goddess. Evidence for this can be seen in the fact that iconographic references to peak sanctuaries, such as the

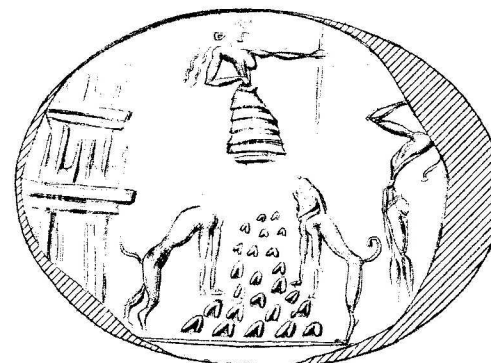


Figure 19.1. The “Mother of the Mountains” seal impression from Knossos. The goddess, flanked by two lions, stands atop a mountain and holds a staff in a commanding gesture. A shrine with horns of consecration appears at the left, and a male adorant is on the right (courtesy of Ingo Pini, CMS).

Knossos ‘Mother of the Mountains’ impression (figure 19.1) and the Zakros Peak Sanctuary stone rhyton, are found only in the Neopalatial palaces.

In addition, the peak sanctuaries that were in use during the Neopalatial period not only had built structures and palatially manufactured goods but were also associated with palatial and urban centers, while those that served smaller settlements fell out of use. A reflection of the palatial appropriation of the cult may be seen in the Procession fresco at the West entrance of Knossos, which Cameron (1987, 324) argues represents a ritual in which a “goddess-impersonator would have arrived and been welcomed into the Palace,” presumably from the peak sanctuary of Jouktas.

CAVE SANCTUARIES

Cave sanctuaries were also a prominent type of cult site in Minoan religion. The appearance of the first sacred cave (on Mount Ida) is contemporaneous with that of the first peak sanctuaries, and, like the peak sanctuaries, the caves were generally visible from a nearby settlement (Tyree 1994, 2006).

The main ritual areas in Proto- and Neopalatial times were deep within the cave; hence, getting to them could be “an intense sensory experience” (Tyree 1994, 41). Stalagmites were often used to mark the most important area of the cave, and in some cases, the stalagmites themselves were marked, as at Psychro, where double

axes were inserted into them. The pouring of libations (e.g., at Kamares) and drinking rituals (e.g., at Psychro, Amnisos, and Skotino) were part of the rites performed in the caves. Evidence of feasting is also attested at a few caves. Marinatos (1993, 124) proposes that an agricultural festival was celebrated in Kamares cave because of the heap of grain that was found within it. Male and female bronze figurines constitute one of the most common finds from the caves, which may indicate that the elite played a key role in the rituals performed there.

Tyree (1994) proposes that ecstatic trances may have been one of the religious experiences associated with the caves. She points out that the caves, with their "potential for repetitive sound and light effects," would have been conducive to such altered states of consciousness. The goal of such a trance may have been to achieve a visionary experience involving the epiphany of the deity, an important element of Minoan religion (Hägg 1983).

TOWN AND PALACE CULT: THE PRE- AND PROTOPALATIAL PERIODS

Cult areas in settlements did not become common until the Protopalatial period. The only sanctuary found in association with a settlement in the EM period (specifically, EM II) is the one found at Myrtos (Warren 1972). This sanctuary shared walls with the settlement's single building complex of ninety-three rooms, but access to the shrine rooms was from the courtyard. The westernmost room of the complex, room 92, was designated as the shrine proper because within it was found a terracotta goddess figurine holding a vessel, which must have fallen from the room's stone bench altar. Room 91, with its sixty-six predominantly fineware vessels, seems to have been the shrine's storeroom. Against the east wall of Room 89 was what Warren describes as "a tripartite structure consisting of two little, low benches or tables with a hearth between them" (Warren 1972, 81). The fragments of a skull from a young adult male were uncovered in this room, causing Warren to comment that "ancestor worship, or even human sacrifice cannot be ruled out" (Warren 1972, 83). In room 90, evidence was found for the preparation of wine.

The "Bench Shrine" type of cult site first seen at Myrtos, with its main shrine room accompanied by various storerooms and preparation rooms, becomes a common pattern for cult sites in the following Protopalatial and Neopalatial periods. There is limited evidence for the Protopalatial period, but the examples that are extant fit this pattern. Gesell (1985, 9; 1987, 124) cites the MM II Bench Sanctuary of Malia as an early example with its shrine room, anteroom, and storeroom. Also, it was common for bench shrines of the time to be accessible both from within the building and from their exterior courtyards, showing that they were meant to serve both the elite and the public (Gesell 1987, 125). This pattern continues into the Neopalatial period.

Among the finds uncovered in these shrines were early examples of the symbols and cult equipment that are characteristic of Minoan religion: double axes, horns of consecration, bulls, birds, triton shells, animal figurines, fixed and moveable offering tables (some covered with red glaze), and libation tables. The goddess herself is attested only in the decoration found on a bowl and a fruit stand found in the Lower West Court Sanctuary Complex of Phaistos, both of which depict a female figure surrounded by dancers (Gesell 1985, 17). The first has loops running down her robe and is therefore interpreted as a "Snake Goddess," while the figure on the fruit stand holds flowers in her upraised arms and has been dubbed the 'Goddess of the Lilies' (Gesell 1983).

TOWN AND PALACE CULT: THE NEOPALATIAL PERIOD

The Palace

Scholars have long debated the religious nature of the monumental Minoan buildings traditionally called "palaces." Rutkowski (1986, 229), on one end of the spectrum, sees the palace as a purely secular building and therefore claims that urban shrines were not important in Minoan Crete. Marinatos (1993, 39–40), on the other hand, states that "what have been termed 'palaces' are, in reality... primarily cult centers, although they had important administrative and economic functions as well." It seems that Gesell (1987, 126) hits the right note when she says, "it is clear that the Minoan palace was the center of cult in the Minoan town." Religion definitely played a significant part in determining the layout of the palaces' West Wings, which held a variety of cult rooms and storerooms.

The Throne Room

The pithos and several alabaster that were found within the throne room at Knossos show that it was used for religious ceremonies: A ceremony involving anointment with unguents must have been about to take place there just before the palace was destroyed (Hägg 1988). Also, the frescoes flanking the throne depicting griffins and palm trees connect the occupant of the throne with the divine realm. However, the question that has troubled scholars is this: Precisely who sat on the throne?

Traditionally, the occupant of the throne was assumed to be the male ruler of Knossos. However, recently several scholars have taken the view that the more likely occupant was the high priestess playing the part of the Goddess in an epiphany ritual. Niemeier (1987) and Cameron (1987) maintain that the shape of the throne resembles the rock upon which the goddess stands in the "Mother of the Mountains" impression. This may then be another indication that the cult of the peak sanctuaries was transferred to the palaces.

Tripartite Shrine

Tripartite shrines are known mostly from their artistic representations (Gesell 1985, 29; Shaw 1978). Their façades have three sections, the middle of which is built higher than the two wings. Each had at least one column, and horns of consecration were placed on their roofs.

Tripartite shrines have been restored at Vathypetro and most famously in the center of the façade of the West Wing at Knossos. This latter restoration was modeled after the Grandstand Fresco, which shows a tripartite shrine in its center. It is thought that the high priestess as the goddess would appear to the crowds in the space between the columns during epiphany rituals.

The Central and Western Courts

The Central Courts of Knossos, Phaistos, and Malia are remarkably similar in size (ca. 24 x 52 m), while that of Zakros is smaller (ca. 12 x 29 m). All are laid out north to south and had cult rooms on their western sides. Several scholars have proposed that the bull-leaping festivals that are so often depicted at Knossos were actually held in the Central Courts. It seems unlikely, however, that this was the case because the paving stones would have proved hazardous to both the running bulls and the leapers (Younger 1995). Marinatos (1993) also maintains that holding the festival in the Central Court, where the number of spectators would have been restricted since the courtyard would have been given over to the bull leaping, makes no sense for an event that the whole community would want or need to see. An area with a soft, earthen floor would be more suitable for bull-leaping ceremonies. Nonetheless, the altars found in the Central Courts at Phaistos, Malia, and Gournia, in addition to the "Grandstand Fresco," which may represent the Central Court (Davis 1987), demonstrate that rituals were held there; perhaps it was the actual sacrifice of the bull, as the finale of the bull-leaping ceremony, that was performed within them.

The more public nature of the rituals held in the West Courts, which were open to the towns surrounding the palaces (while access to the Central Court could be restricted), has been emphasized by Gesell (1987), Marinatos (1987), and Hägg (1987). Hägg (1987) reconstructs the west façade of the Neopalatial palace at Knossos as a monumental tripartite structure, reminiscent of the one in the "Grandstand Fresco," and proposes that it had a "window of appearance" in which an epiphany ritual could be viewed by people gathered below. The existence of a sanctuary on the upper floor is indicated by fresco fragments that depict architectural façades with columns, double axes, and horns of consecration.

The Sacred Grove Fresco, with its raised walkways that are reminiscent of those found in the West Court, most likely depicts a festival held in that court. Marinatos (1987), citing the underground granaries found in the West Courts of Knossos, Phaistos, and Malia, has proposed that it was a harvest festival that was being celebrated. She also believes that the Minoans would have continued to celebrate the

harvest in the West Court despite the eventual filling in of the granaries at Knossos and Phaistos and that an offering or tribute of grain to a palatial official (the high priestess/goddess?) was a key element of the Neopalatial festival.

Lustral Basins and Pillar Crypts

Minoan religious practice gave rise to two very distinctive types of cult rooms, the lustral basin and the pillar crypt, both of which appear in the Protopalatial period but take on their canonical form in the Neopalatial period. The lustral basin (so named by Evans because of the unguent flasks found in one) consisted of a room with a sunken floor that was lined with gypsum, plaster, or cement and was reached via an L-shaped or dogleg staircase. The walls above the lining were plastered and sometimes decorated with frescoes. Lustral basins were clearly very popular since they have been found in all of the palaces (Knossos had at least three, while Phaistos had five) and most of the villas.

The ritual use of many lustral basins is clear from the material remains found within them. For instance, one of the Phaistos lustral basins (room 63d) contained a bull's head rhyton, a piriform rhyton, two horns of consecration, and bronze double axes. Moreover, frescoes with religious themes have been found in and around lustral basins, including horns of consecration on top of altars at Zakros (Platon 1971, 182). In Xeste 3 at Akrotiri, a horns of consecration with blood dripping down it was painted within the lustral basin, while the fresco program in the surrounding room reflects an initiation ritual (Marinatos 1984, 73–84).

Despite the various indications of the religious nature of the lustral basin, several (particularly those found in residential areas) lack any sure signs of cult usage, which has caused some scholars, such as Graham (1987, 99–108) and Platon (1971, 183), to propose that they were sometimes used for cult practice, but primarily as bathrooms. One problem with this suggestion is that the lustral basins lack drains; another is that the finds do not suggest an extensive use of water. It seems more reasonable to give the religious evidence pride of place and presume that all lustral basins had a ritual use (Gesell 1985, 25; Nordfeldt 1987). Marinatos has proposed that they were a kind of adyton that offered a physical separation from the normal environment and that they were used in association with pier and door rooms that could be shut so as to plunge individuals into darkness or opened to bathe them in light (1993, 77–87).

The pillar crypt was basically a rectangular room with one, two, or three square pillars in the center. Very often a cult room with a column was situated directly above the pillar crypt. Several pillars have basins or channels for liquids set in the floor at their bases. Double axes were very often incised on the pillars, and stands for actual double axes were sometimes found. Bull's head rhyta also appear in the pillar crypts.

Hallager (1987) saw the pillar crypts in the West Wing of Knossos, which were situated on the path from the West Wing entrance to the storage magazines, as the

location of a harvest or purification festival celebrated when the crops were brought in. Pillar crypts also occur in tombs, which may suggest a connection between funerary and palace cult (Gesell 1985, 26; Marinatos 1993). This connection, however, is not in conflict with the agricultural ceremony proposed by Hallager since stored grain, with its potential for rebirth, could have been linked to funerary cult's concern with the cycle of life and death.

THE PRACTICE OF MINOAN RELIGION

It is clear from the numerous representations of female goddesses in various media that a female deity was the major religious focus of Minoan religion. She appears as the Mother Goddess, the Mistress of the Animals, and the Guardian of Cities. However, the question that has been debated is whether the Minoans worshipped many different female deities or if one Great Goddess appeared in a multitude of aspects. Traditionally, the one Great Goddess theory has prevailed and has often been taken as a given among scholars. Nonetheless, Dickinson (1994) has made the case that it would be strange for Minoan religion to be so different from the contemporaneous religions of the Mediterranean and the Near East. He therefore favors the idea of a multiplicity of female deities. Moss (2005) argues that there was indeed a full Minoan pantheon and bases her hypothesis on the different representations of both male and female deities.

The act of summoning the goddess and her resulting epiphany appears to have been a major part of Minoan religion. In many rituals, the presence of the goddess was probably represented by a high priestess, but her presence could also have been experienced in a nonmaterial way (Warren 1988). Minoan iconography shows men and women in positions of ecstatic worship, the focus of which could be a baetyl (La Rosa 2001; Warren 1990), a tree, the goddess's dress (which was probably presented to the deity as part of the ritual), or even a figure-of-eight shield (figure 19.2). Hägg (1983) has termed these two types of worship "enacted" and "ecstatic."

Male deities, while not nearly as prominent in the iconography as female ones, are suggested by scenes of small figures floating in the air, which seem to be descending or arriving (figure 19.2). The "Master Impression," a sealing that shows a male holding a staff atop a town, may also represent a male deity. Also, various cult paraphernalia such as horns of consecration, bull's head rhyta, double axes, and images of bull leaping and sacrifice (Rehak 1995; Younger 1995) show the importance of the bull in Minoan (particularly Knossian) religion.

It has also been suggested that the Minoans practiced human sacrifice. Within a Protopalatial (MM II) sanctuary near Archanes at Anemospelia on the lower slopes of Mount Jouktas, four human skeletons were found (Sakellarakis and Sapouna-Sakellarakis 1991). Three of these people were killed when the building collapsed in an earthquake, but one eighteen-year-old male was found lying on his side on

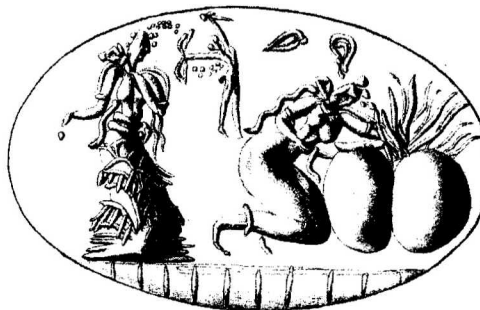


Figure 19.2. A Cretan gold ring showing a woman worshipping a double baetyl on the right, the high priestess (goddess?) on the left, and an armed male deity who floats in between (courtesy of Ingo Pini, CMS).

a platform in the middle of the room in a contracted position, as if he had been trussed. A bronze dagger was found among his bones.

A second example comes from an LM IB building, part of which was used for cult practice, in the town of Knossos. Within a small chamber were found the remains of four children whose bones had cut marks, which indicate that their flesh had been removed, implying that the children had been killed and eaten as part of a ritual (Warren 1981). Some doubt exists that these examples actually provide evidence that the Minoans performed human sacrifice, but if human sacrifice was part of Minoan religious practice, it must have been rare.

POSTPALATIAL CRETE

At the end of LM IB, a disaster struck Minoan society that destroyed all of the palaces and villas except for Knossos. After this disaster, we see evidence that the Mycenaeans established themselves at Knossos and ruled over what was in many respects a flourishing economy.

Changes in the expression of Minoan religion at this time are fairly dramatic. Most of the peak sanctuaries fall out of use (Peatfield 1990), while open rock shelters are preferred to the previous period's deep stalagmitic sacred caves (Tyree 1994). Lustral basins were filled in, and pillar crypts were used for different purposes. Any newly built shrines were of the bench-shrine type, such as those found at Gournia and the Shrine of the Double Axes at Knossos (Gesell 1985, 47).

A new type of cult image is also found in these shrines: the Goddess with Upraised Arms. These terracotta figures are sometimes quite large, up to 0.85 m, and it is likely that their bell-shaped lower halves wore flounced skirts. The crowns of the idols usually held the deity's attributes, such as poppies, birds, snakes, horns of consecration, and disks. These attributes could be combined on individual figures, and two figures with the same attributes could appear in one shrine. Thus, it

may be that the statues do not depict particular goddesses but rather represent a general goddess of nature (Marinatos 1993, 227; cf. Peatfield 1994a).

One of the most common pieces of cult equipment in this period is also new: tubular stands that have loops of snakes running along the sides of the vessel, which were therefore called "snake tubes." The snake tubes may have come in sets with particular Goddesses with Upraised Arms (Gesell 1985, 44).

It has been proposed that at this point the Mycenaean influenced the practice of Minoan cult (Renfrew 1981), and some change is evident in the predominance of the bench shrine, the use of terracotta cult figures (although there is no exact parallel for the Goddess with Upraised Arms on the mainland), and the disuse of lustral basins and pillar crypts. Nonetheless, although the form of the goddess is new, the attributes that accompany the cult figures are familiar from Proto- and Neopalatial iconography. This implies that the deities of the different periods were the same. Furthermore, horns of consecration and double axes were commonly used in the Postpalatial shrines, thereby contributing to the idea that the belief system founded in the Protopalatial period was still in use despite the presence of the mainlanders (Gesell 1983; Hägg 1997). The LM III Aya Triadha sarcophagus, a stone example of the terracotta larnakes used for burials, with its scenes of animal sacrifice and double axes associated with a man's burial, seem to connect Minoan religion in its latest stages with its origins—as intertwined with funerary cult and the cycle of life and death.

BIBLIOGRAPHY

- Branigan, Keith. 1970. *The Tombs of Mesara: A Study of Funerary Architecture and Ritual in Southern Crete, 2800–1700 B.C.* London: Duckworth.
- . 1988. *Pre-palatial: The Foundations of Palatial Crete: A Survey in the Early Bronze Age*, 2d ed. Amsterdam: Hakkert.
- . 1993. *Dancing with Death: Life and Death in Southern Crete c. 3000–2000 B.C.* Amsterdam: Hakkert.
- . 1998. "The Nearness of You: Proximity and Distance in Early Minoan Funerary Behaviour." In *Cemetery and Society in the Aegean Bronze Age*, ed. Keith Branigan, 13–26. Sheffield Studies in Aegean Archaeology 1. Sheffield: Sheffield Academic Press.
- Cameron, Mark. 1987. "The 'Palatial' Thematic System in the Knossos Murals." In *Function of the Minoan Palaces*, 321–28.
- Cherry, John F. 1978. "Generalisation and the Archaeology of the State." In *Social Organisation and Settlement*, ed. David Green, Colin Haselgrove, and Matthew Spriggs, 411–37. *BAR-IS* 47. Oxford: British Archaeological Reports.
- . 1986. "Politics and Palaces: Some Problems in Minoan State Formation." In *Peer Polity Interaction and Socio-political Change*, ed. Colin Renfrew and John F. Cherry, 19–45. New York: Cambridge University Press.
- Davis, Ellen. 1987. "The Knossos Miniature Frescoes and the Function of the Central Courts." In *Function of the Minoan Palaces*, 157–61.

- Dickinson, Oliver T. P. K. 1994. "Comments on a Popular Model of Minoan Religion." *OJA* 13: 173–84.
- Gesell, Geraldine. 1983. "The Place of the Goddess in Minoan Society." In *Minoan Society*, 93–99.
- . 1985. *Town, Palace, and House Cult in Minoan Crete. SIMA* 67. Gothenburg: Åström.
- . 1987. "The Minoan Palace and Public Cult." In *Function of the Minoan Palaces*, 123–28.
- Graham, James W. 1987. *The Palaces of Crete*. Princeton: Princeton University Press.
- Hägg, Robin. 1983. "Epiphany in Minoan Ritual." *BICS* 30: 184–85.
- . 1987. "On the Reconstruction of the West Façade of the Palace at Knossos." In *Function of the Minoan Palaces*, 129–34.
- . 1988. "The Last Ceremony in the Throne Room at Knossos." *OpAth* 17: 99–105.
- . 1997. "Religious Syncretism at Knossos in Post-palatial Crete?" In *La Crète mycénienne*, 163–68.
- Hallager, Erik. 1987. "A 'Harvest Festival Room' in the Minoan Palaces? An Architectural Study of the Pillar Crypt Area at Knossos." In *Function of the Minoan Palaces*, 169–77.
- Karetsou, Alexandra. 1981. "The Peak Sanctuary of Mount Juktas." In *Sanctuaries and Cults*, 137–53.
- Kyriakidis, Evangelos. 2005. *Ritual in the Bronze Age Aegean: The Minoan Peak Sanctuaries*. London: Duckworth.
- La Rosa, Vincenzo. 2001. "Minoan Baetyls: Between Funerary Rituals and Epiphanies." In *Potnia*, 221–27.
- Marinatos, Nanno. 1984. *Art and Religion in Thera: Reconstructing a Bronze Age Society*. Athens: Mathioulakis.
- . 1987. "Public Festivals in the West Courts of the Palace." In *Function of the Minoan Palaces*, 135–43.
- . 1993. *Minoan Religion: Ritual, Image, and Symbol*. Columbia: University of South Carolina Press.
- Moss, Marina. 2005. *The Minoan Pantheon: Towards an Understanding of Its Nature and Extent. BAR-IS* 1343. Oxford: British Archaeological Reports.
- Niemeier, Wolf-Dietrich. 1987. "On the Function of the 'Throne Room' in the Palace at Knossos." In *Function of the Minoan Palaces*, 163–68.
- Nordfeldt, Ann Charlotte. 1987. "Residential Quarters and Lustral Basins." In *Function of the Minoan Palaces*, 188–94.
- Nowicki, Krzysztof. 1994. "Some Remarks on the Pre- and Protopalatial Peak Sanctuaries in Crete." *Aegean Archaeology* 1: 31–48.
- Peatfield, Alan. 1983. "The Topography of Minoan Peak Sanctuaries." *BSA* 78: 273–80.
- . 1987. "Palace and Peak: The Political and Religious Relationship between Palaces and Peak Sanctuaries." In *Function of the Minoan Palaces*, 89–93.
- . 1990. "Minoan Peak Sanctuaries: History and Society." *OpAth* 18: 117–31.
- . 1994a. "After the 'Big Bang'—What? Or Minoan Symbols and Shrines beyond Palatial Collapse." In *Placing the Gods: Sanctuaries and Sacred Space in Ancient Greece*, ed. Susan E. Alcock and Robin Osborne, 19–36. Oxford: Clarendon.
- . 1994b. "Divinity and Performance on Minoan Peak Sanctuaries." In *Potnia*, 51–55.
- Platon, Nicholas. 1971. *Zakros: The Discovery of a Lost Palace of Ancient Crete*. New York: Charles Scribner's Sons.
- Rehak, Paul. 1995. "The Use and Destruction of Minoan Stone Bull's Head Rhyta." In *Politeia*, 435–60.

- Renfrew, Colin. 1981. "Questions of Minoan and Mycenaean Cult." In *Sanctuaries and Cults*, 27–31.
- Rutkowski, Bogdan. 1972. *Cult Places in the Aegean World*. Wrocław: Polish Academy of Sciences, Institute of the History of Material Culture.
- . 1986. *Cult Places of the Aegean*. New Haven: Yale University Press.
- Sakellarakis, John A., and Efi Sapouna-Sakellarakis. 1991. *Archanes*. Athens: Ekdotike Athenon S.A.
- Shaw, Joseph W. 1978. "Evidence for the Minoan Tripartite Shrine." *AJA* 82: 429–48.
- Soles, Jeffrey S. 1992. *The Prepalatial Cemeteries at Mochlos and Gournia and the House Tombs of Bronze Age Crete*. Hesperia Suppl. 24. Princeton: American School of Classical Studies at Athens Press.
- Tyree, Loeta. 1994. "Diachronic Changes in Minoan Cave Cult." In *Potnia*, 39–50.
- . 2006. "Minoan Sacred Caves: The Natural and Political Landscape." In *Proceedings of the 9th International Congress of Cretan Studies, 1–7 October 2001*, 329–42. Heraklion: Society of Cretan Historical Studies.
- Warren, Peter. 1972. *Myrtos: An Early Bronze Age Settlement in Crete*. London: Thames and Hudson.
- . 1981. "Minoan Crete and Ecstatic Religion: Preliminary Observations on the 1979 Excavations at Knossos." In *Sanctuaries and Cults*, 155–67.
- . 1988. *Minoan Religion as Ritual Action*. Gothenburg: Gothenburg University.
- . 1990. "Of Baetyls." *OpAth* 18: 192–206.
- Watrous, L. Vance. 1987. "The Role of the Near East in the Rise of the Cretan Palaces." In *Function of the Minoan Palaces*, 65–70.
- . 1995. "Some Observations on Minoan Peak Sanctuaries." In *Politeia*, 393–403.
- Younger, John. 1995. "Bronze Age Representations of Aegean Bull-Games, III." In *Politeia*, 507–545.

CHAPTER 20

MYCENAEAN RELIGION

SUSAN LUPACK

THE FOUNDATIONS OF MYCENAEAN RELIGION

The evidence for the Mycenaean period is different from that for the Minoan in two important respects. First, in general the Mycenaean evidence is not as abundant as it is for the Minoan culture. Because of this, scholars can be dismissive of the evidence we do have, thereby giving the impression that not much can be said about Mycenaean religion. However, the body of archaeological material is now not as scanty as is often portrayed, and positive information can be gleaned from the sites that have been discovered. Furthermore, when the archaeological evidence is combined with the information provided by the Linear B tablets, a fairly informative picture of Mycenaean religion results.

The second difference between Minoan and Mycenaean religion is that the archaeological evidence for religious structures does not extend over as long a period as the Minoan, which means that it is not possible to trace the origins and development of Mycenaean religion with much precision or fullness. Many authors have remarked on the relative dearth of evidence for religious practice on the mainland in the early periods (see, e.g., Dickinson 1994; Mylonas 1966, 137).

Nevertheless, Caskey (1990, 20) has found evidence for EH ritual in the large, decorated hearths that are found in geographically diverse mainland sites and proposed that they at least parallel and may even constitute the "remote but direct ancestors of the Megaron hearth of Mycenaean times." Unfortunately, nothing similar has been found in the MH period, but evidence for communal sacrificial rites has been found on the Kynortion hilltop above Epidauros (Lambrinudakis 1981) and on the island of Nisakouli near Methoni (Choremis 1969). At both sites, MH sherds were found in layers of ash that contained burnt animal bones, and those on Nisakouli were associated with an altar/hearth structure. The types of bones and

also covered the pyre. The platform was in turn covered by a mound of earth and stones, which formed a tumulus. In many of the tumuli, additional graves were later inserted in the stone platform. This marks the start of a vogue for circular tombs in western Greece that continues in the Middle Bronze Age, though elsewhere on the mainland there is more of a break (Cavanagh and Mee 1998, 17).

Different regional traditions also developed on Crete. The tombs in the south of the island were circular stone tholoi (Branigan 1993). The first tholoi were constructed in EM I, and this was still the most common tomb type in the Protopalatial period. Around seventy have been discovered in cemeteries of one, two, or three tombs. At sites with more than one tomb, their use overlaps. They were built a short distance from the settlement, often within 100 meters or so (Branigan 1998). The dead were nearby, but the tombs were oriented so that the entrance faced away from the settlement. Consequently, they could not see their homes and would be less inclined to return. The fact that the tomb entrances were carefully blocked highlights this desire to keep the dead in their place. Nevertheless, because of the size and solid construction of the tombs, they were a very visible and permanent presence. Many of them remained in use for centuries and would have been a powerful symbol of the entitlement that a community could claim to land and other key resources (Murphy 1998).

A tholos has a circular wall made up of a rubble core faced with larger blocks of stone, which can be more than two meters thick in the case of the largest tombs, which have a diameter of ten meters or more (Branigan 1998). There has been considerable speculation about the type of roof. Because the walls lean in and masses of fallen stone have sometimes been found in the chamber, the obvious solution is a stone vault. However, the walls were not buttressed in any way, so they could not have supported the weight of a stone roof. Mud brick is an alternative, though this would be identifiable and has not been reported from any of the excavated tombs. Thatch is another possibility, but no consensus exists as yet. The entrance was almost always on the east side of the tomb, so sunrise may have had a special significance. A number of tholoi also had annexes in front of the entrance, which had been added later.

Because of the length of time the tholoi remained in use and the fact that most have been looted, it is not easy to reconstruct the funeral rites (Branigan 1993). The dead were apparently laid out on the floor of the tomb with personal possessions, which could include weapons, tools, jewelry, seal stones, and pottery. Food and drink were provided, some of which may have been consumed by the mourners at the funeral. The number of cups suggests that a toast was drunk or libations poured before the entrance of the tomb was sealed. Few skeletons have been found in situ, and it is evident that, once the body had decomposed, the bones were swept aside. It seems that the tombs were periodically cleaned out and purified. The bones would then be transferred to one of the annexes, which were used as ossuaries. When the remains of earlier burials were moved, no doubt a ceremony marked this final stage of the journey. The presence of stone platforms suggests that the tombs may have been a focus for cult and ritual activity at other times as well, which implies that the

dead were venerated if not worshipped. As far as we can tell, the entire community was buried in these tombs. There was certainly no discrimination on the basis of age or gender. Some tombs were probably reserved for particular groups of families, which would explain why settlements had two or three tholoi, but differences in status were not emphasized.

At Ayia Photia in eastern Crete is a cemetery with more than 250 EM I/II tombs. Most have a vertical shaft and a rectangular or oval chamber sealed by a stone slab (Davaras and Betancourt 2004). Similar tombs appear in the Cyclades, and much of the pottery and metalwork is Cycladic in style. The possibility that this was a case of colonization rather than acculturation or close contact has therefore been raised. There were also rectangular stone-built tombs in the northern and eastern parts of the island (Soles 1992; Vavouranakis 2007). In some respects they resemble houses, but it is questionable whether they were conceived as a home away from home for the dead. The cemetery on the island of Mochlos was located so that the tombs would be visible from the sea as ships approached, but they cannot be seen from the settlement. Approximately thirty tombs have been excavated, built up against the rock face in such a way that they seem like part of the landscape. A processional path winds up through the cemetery to the most elaborate tombs I/II/III and IV/V/VI. In front of IV/V/VI were a paved court and a platform, possibly an altar. Although the tombs have been disturbed, they were evidently used for primary burials. In due course, the bones were moved to another compartment, where the skulls were carefully stacked together. Much of the jewelry that was buried in the tombs is of gold or silver. Many superb stone vessels have also been found. The finest objects were not found exclusively in the largest tombs, though they were concentrated in I/II/III and IV/V/VI. Status must have been a more contentious issue at Mochlos and was certainly the case at Malia, where one of the tombs is enormous. Known as the Chrysolakkos, or gold pit (from the spectacular finds, most of which were looted), the tomb measures approximately forty by thirty meters, and the interior was divided into rows of burial compartments. Built at the start of the Protopalatial period, at around the same time as the palace at Malia, it was surely reserved for the elite (Soles 1992, 163–71).

The burial record is not always an accurate barometer of social change, but the political upheavals on Crete clearly had an impact. The cemetery at Archanes in the north of the island is unusual in that it contains tholoi and rectangular built tombs (Sakellarakis and Sapouna-Sakellarakis 1997). This fusion of two distinct architectural styles integrated different traditions and continued in the Middle Minoan period, when the cemetery was expanded. Tomb B, a two-story structure with a tholos enclosed on three sides by annexes, is particularly impressive. Many of the dead were buried in clay jars or terracotta larnakes. It is unclear whether this was an indication of higher status or reflects a greater emphasis on individuality, which is evident from the choice of personal items in these tombs. The seal stones especially were a mark of identity. It is significant that the level of activity at Archanes increased in MM IA, just before the old palaces were constructed, a time when the competition for power must have intensified.

CHAPTER 24

MINOAN SEALS AND SEALINGS

JUDITH WEINGARTEN

SEALS are small semi-precious or common stones cut into standard shapes, polished, pierced, and then engraved with ornamental patterns, figures or, occasionally, inscriptions. When pressed into clay or wax, the seal leaves a legible impression in relief. A relatively small group of seals are metal rings with broad engraved bezels that can be viewed both on the ring and in relief.

More than any other ancient work of art, seals are intimate objects which are literally bound to their owners, whether worn on a bracelet or necklace or as pendant or pin. Given the diversity of materials, colors, images, and purposes, seals resonate on multiple levels. Their basic function is to identify the seal owner, but they can be worn, too, as conspicuous jewelry. Sometimes they indicate the seal-owner's rank or set apart a specific social group, or they may serve amuletic or magical purposes. In ancient societies, their primary purpose was to secure property—whether in the home or the public arena—and to assign responsibility by means of clay sealings impressed by a specific individual who is identified by the seal's impression.

The study of Minoan seals began even before the discovery of Minoan civilization. Long before archaeologists arrived on the scene, Cretan women were wearing 'milk-stones'—brightly colored Minoan engraved gems—on their breasts or around the neck. These were believed to contain magical powers to ensure the milk of a nursing mother. Shepherds and farmers had been finding such "milk-stones" for generations on the Kephala hill at Knossos. When Arthur Evans first traveled to Crete in 1894, he visited Knossos and soon began collecting gemstones. He was excited by the miniature scenes on the gems, including some with peculiar, inscribed pictographic characters. His trips to Crete led to the excavations at Knossos and the revelation of the Minoan world (MacGillivray 2000).

PREPALATIAL MINOAN SEALS AND SEALINGS

The story of Minoan glyptic begins in EM II, when the first seals and one sealing were found at the southern coastal settlement of Myrtos–Fournou Korifi (CMS V.1, 14–20; Warren 1972, 226–70), in tombs at Lebena on the south coast (CMS II.1, 195–200, 202, 203; Alexiou and Warren 2004, 134), and at Arkhanes in the north-center of the island (Sakellarakis 1976, 515–18, 1–8, figure 2; 1980, figure 4, 1–8). Based on these, a fair number of other seals, primarily from the Mesara tombs but also some from as far away as Mochlos in the north and Palaikastro in the far east, can also be ascribed with some confidence to EM II (Sbonias 1995, 74–83).

Like their northern neighbors in the Cyclades and on the Greek mainland, the early Minoans chose to use stamp seals. Seal shapes were predominantly irregular pyramids and cones and made of soft stone and bone. Seal designs mostly range from simple scratches to cross- or diagonal-hatching, with the few more elaborate patterns, such as the chip-cut seals from Lebena and the trilobes and opposed C-spirals from Arkhanes suggesting northern connections (Sbonias 1995, 79; Aruz 2008, 29–30). One striking link across the Aegean is the angle-filled cross that appears on the sealing from Myrtos. This was one of the most popular ways of decorating seals in Anatolia: From there, the motif appears to have migrated to the Greek mainland, the Cyclades, and Crete (Aruz 2008, 29).

The new craft, needing only simple tools, was probably carried out at the village level (Sbonias 2000, 280–82). In truth, there seem to be few EM II settlements larger than villages on Crete at this time, and even the striking tholos tombs need not have served anything grander than large villages. There is nothing comparable on the island to the monumental buildings or fortifications that appear in EB II on the mainland and some islands—which may be why there is nothing comparable to the quality and variety of mainland seals as known from their impressions. The single sealing from Myrtos does show, however, that seals could be understood as sphragistic instruments even if the connection was not always made: There are also EM II sealings without any seal impressions at all (Weingarten forthcoming).

While there may have been a gap in settlement and craft development after the end of EM II (Watrous, Hadzi-Vallianou, and Blitzer 2004, 251–52), a glyptic gap remains problematic. Nevertheless, at some time during EM III–MM I, a common glyptic tradition evolves that seems to run in tandem with the growth of settlements like Knossos, Malia, and Phaistos. Smaller communities, too, such as Gournia and Palaikastro, show signs of growth and town planning, while substantial free-standing houses appear on several sites. No site, however, appears to have had a chief building dominating the rest of the settlement.

As in many early seal traditions, glyptic ‘take off’ is reflected in a rich variety of seal shapes. Many seals now display quite sophisticated and complex motifs and there is a general advance in the quality of carving. Designs often follow clear compositional schemes, some of which become characteristic of Minoan art ever after, especially Rotation, Radiation, and Rapport (Yule 1980, 185–91).



Figure 24.1. Modern impression of Parading Lions Seal (hippopotamus ivory) from Platanos Tholos A (CMS II 1 248a; photo courtesy CMS).

The first definable style-groups now emerge, notably the Parading Lions-Spiral group and the large Border/Leaf Group, both undoubtedly manned by specialist craftsmen (Yule 1980, 208–210; Sbonias 1995, 89–106). Bone and soft stone remain in common use, but there is also much imported hippopotamus ivory.

Many seals of the Border/Leaf group display Egyptianizing patterns. This workshop is also responsible for the so-called white pieces, a material that mimics Egyptian burnt steatite (Weingarten 2005, 760 and note 8). Seals of the Parading Lions-Spiral group show an intriguing borrowing: The lion iconography (which appears on 66% of their seals) comes from the south, and it may not be coincidence that most of these seals, often large stamp cylinders, are made of hippopotamus ivory (figure 24.1). The earliest seal from Knossos was stamped with a Parading Lions seal (Hood and Kenna 1973, 103–106; CMS II.8 6). Parading Lions seals seem altogether special, and the seals may have served as badges for an emerging elite in this period, leading up to the foundation of the palaces. The choice of the lion as the premier emblem of this group was not an artistic choice but a social and political one—imagery intentionally adopted from Egypt in order to convey the idea of power (Weingarten 2005, 763–65).

In MM IA, a burst of tomb building took place in the great cemetery of Arkhanes, 8 km to the north of Knossos. Building bigger and better tombs may in itself have been part of the process by which hierarchy became established in north-central Crete (Hitchcock forthcoming). The abundant seal evidence from Arkhanes supports the idea of an elite who were busy acquiring power—and the symbols of power—in the MM IA–IB periods. Hierarchy and emblematic power come together with the appearance here of the first inscribed seals, often elaborately carved bone seals engraved with simple Hieroglyphic signs. These ‘Arkhanes script’

seals are repeatedly described as Prepalatial in date: This is by no means certain as the relevant tombs were also in use in MM IB (Macdonald and Knappett 2007, 137 and note 51), so the seals could be contemporary with the foundation of the palace at Knossos. Be that as it may, the development of script is undoubtedly a key step in the centralization of economic power, and inscribed seals become a major bureaucratic tool at Knossos and elsewhere in the Protopalatial period.

There is still no evidence that Prepalatial seals were used for any purpose greater than that of household management (*pace* Pini 1990, 34–37; Vlasaki and Hallager 1995, 251–70; Hallager 2000, 97–99). That is, sealings are found scattered in houses and workshops, follow no patterns, and are rarely, if ever, repetitive. Administrative sealings, on the other hand, which are part of a structured process dealing with the centralized management of goods, should be evidenced by clusters of sealings in central buildings (or linked to central buildings), following set patterns and often repetitive; there may also be associated evidence of bureaucratic administration, such as door sealings and/or scribal records.

This is the kind of evidence that we do find, limited at first but steadily growing after the foundation of the First Palaces in MM IB.

FIRST PALACE SEALS AND SEALINGS

The earliest closely dated Minoan seal depicting a long-horned goat (CMS II.8, 374; see figure 24.2)—an enduring glyptic theme on Crete—stamped three clay noduli found in an MM IB storeroom at Knossos (Weingarten and Macdonald 2005). Noduli have no string holes or other means of attachment to objects and could not have sealed or labeled anything. They may have served as *laissez passer* or receipts given for occasional work; they are simple documents, practical in a society already too populous for entirely face-to-face contacts but where literate instruments are limited or lacking.

Of the nine sealings found in the Room of the Olive Press (MM IA = Panagiotaki 1993; MM IB = Weingarten and Macdonald 2005, 397 and nn. 9, 10), one was impressed by two *different* seals (CMS II.8, 17+18), the first in a long line of *multiple* sealings—a sphragistic habit that continues through LM I at Knossos and also at LM IB Zakro. Inscribed seals are now being used: A fragmentary sealing in the MM IB (or MM IIA?) Vat Room Deposit is stamped by a seal engraved with the Hieroglyphic ‘arrow’ sign, CHIC 050 (Panagiotaki 1999, 39); and a nodulus from a Knossos MM IIA workshop was impressed by an ivory/bone seal displaying two signs: a human hand (CHIC 008) and a heart-shaped sign (CMS II.8, 15; Weingarten 2003).

At Knossos, sealing evidence shows the use of sealings and noduli both within and immediately outside the palace structure. This does not support the view that the First Palaces are purely ceremonial centers (Schoep 2005). In any case, what matters is not the intra- or extra-mural location of the administrative power, but the existence of that power.



Figure 24.2. MM IB nodulus, Knossos southwest palace angle (“Early Magazine A”) (CMS II.8 374; photo courtesy CMS).

In Middle Minoan II, Cretan craftsmen adopted the horizontal bow lathe from the Near East, a tool that allowed them to carve hard stones for the first time. This led to a colorful range of semiprecious seal stones, a richly visual, perhaps symbolic choice, characteristic of Minoan glyptic and without parallel in the Near East or elsewhere. While soft stone seals continued to be made throughout the Minoan period, seals of bone and ivory soon vanish. New seal shapes appear—especially the handled signet (*petschaft*) and three- and four-sided prisms, which were put to use by palace bureaucracies.

The end of MM IIB is marked by major destructions, leaving abundant evidence of sealing and scribal administration.

In the palace of Knossos, Quartier Mu at Malia, and Petras in the east, scribes were writing in the Hieroglyphic script on three- and four-sided clay bars and medalion-shaped ‘labels.’ Inscribed Hieroglyphic seals, often of hard stone, were used for unquestionably bureaucratic purposes, most often appearing on crescent-shaped sealings. At Knossos, a group of seal users—striking in that most of their seals bore figurative designs—stamped a new, flat-based sealing type that had sealed leather documents—so I simply call them ‘document sealings’ (Pini 1990; Weingarten 1995).

In southern Crete, scribes wrote in the Linear A script on bars, tablets, and roundels. Bureaucrats at Phaistos and Monastiraki stamped thousands of sealings in a day-to-day accounting system almost identical to that known from the Near East—as indicated by the diagnostic knob and peg traces on the sealing reverses (Fiandra 1968; Heath-Wiencke 1976). In all, more than 327 different seals were used to stamp sealings at Phaistos—so storeroom management was comparable in scale to that of a Near Eastern bureaucracy. The majority of seals at Phaistos had geometric or interlace designs and were made of soft materials, but almost 22% bore more ‘advanced’ figurative images of plants, animals, and even human figures. Some were from hard seal stones, and at least five were

from metal rings: Such rings may have led to the 'flowering of glyptic naturalism' since any mistakes in the rendering of details could be corrected by reheating the metal.

The administrative systems expressed in the Hieroglyphic and Linear A scribal spheres are almost entirely different and geographically distinct. After the great destructions, Hieroglyphic administration and its script disappear. Henceforth, all Crete uses Linear A. The production of inscribed seals, too, came to an end: Whatever the meaning of the texts on the seals, they were not translated into Linear A. Such an abrupt loss of script and inscribed seals could hardly have occurred without a major shift in social or political power, probably violent. To my mind, therefore, the New Palace period really begins not with architectural modifications but with the appearance of the Linear A script over the whole island.

SECOND PALACE SEALS AND SEALINGS

Late Minoan I is a time of growing prosperity throughout Crete. New buildings are erected above the older palatial structures, and palaces are founded at Zakro and Galatas. From the administrative viewpoint, the most striking feature is the construction or expansion of the villas and rich farmhouses throughout the north, south, and, east of the island. Located in fertile valleys, the villas presumably functioned as provincial centers of authority in a complex series of geographically related units (Rehak and Younger 2000, 278–85). When this system collapsed, with widespread burnt destructions at the end of LM IB, some villas left evidence of sealing activities but little or no indications of scribal administration.

Neopalatial glyptic shows steadily improved engraving of animated and life-like images of animals and humans, sometimes placed in elaborate landscapes reminiscent of fresco paintings. Perhaps at the behest of the new bureaucracy, sealing shapes are pared down to just three: cushion and lentoid seals, which developed out of earlier shapes, and the new amygdaloid, first confined to the large and distinctive class of talismanic seals before spreading to more conventional subjects.

Neopalatial naturalistic glyptic is sharply skewed to depictions of animals: 85% compared to 15% with humans (Younger 1988, x–xii). There is, however, a bias toward human subjects on metal rings. Although only about two hundred rings and ring impressions survive, rings occupy a prominent place in Minoan iconography, with scenes of hunting, fighting, chariot driving, and bull leaping especially, although not exclusively, associated with metal rings.

Despite the often lifelike effect, it is wrong to describe these seals as naturalistic. It is doubtful that any Minoan artist ever tried to make a literal representation or to reproduce anything as an exact portrayal of a given scene or object. Nor are they in any meaningful sense "inspired by nature" (*pace* Krzyszkowska 2005, 146). Whether portraying human figures or bulls in flying gallop or butterflies and

flowers, naturalism was not the Minoan artists' aesthetic goal. One need only look at the Minoan male figure to see that they do not accurately represent the human body: wasp-waisted and wiry, the physical body is distorted in order to create an impression of youth and agility (Boardman 1970, 38).

The image projects the focal points of the Minoan worldview—not the world as it is. Seal carvers emphasized some aspects of the subject while minimizing or omitting others. For example, it has been argued that the aniconic or featureless heads of female figures on some LM I gold rings result from the techniques of punching and engraving (Krzyszkowska 2005, 138n63). While glyptic style and technique are undoubtedly entwined, technical restraints should apply equally to all parts of the ring, which is simply not the case: The women's flounced skirts on the same rings are almost always so finely detailed that they explicitly "encourage attention" (Boardman 1970, 38). Put another way, whether the women are goddesses, priestesses, or worshippers is not the issue: They are wearing the skirt of the goddess, and *that*, not human features, is the focus of the scene. These images are statements of what the seal engravers wanted to show, not an objective account of a religious scene (*pace* Krzyszkowska 2005, 142)—in this case that the women's skirts are more important than their heads or limbs.

Despite the high technical and artistic quality of rings and many hard stone seals, the Minoan elite did not always choose to use such pieces as they went about palatial or villa business. Surprisingly, at LM IB Ayia Triada, only three of the top sealing leaders (i.e., those who used their seals most often [= CMS II.6 11, 101, 70]) had excellent seals, while many of the most active seal owners used mediocre or even poor-quality seals: a quasi-talismanic bird, a wretched Bird-Lady, a sausage-shaped female griffin, talismanic fish, and a lion so poorly engraved that it might be a scratching dog about to fall over (CMS II.6 110, 28, 99, 134, 85). It seems that seals were not chosen primarily for their aesthetic excellence but for reasons that mattered more to the seal owner, perhaps because of family connections or amuletic efficacy (Weingarten 1988).

At LM IB Zakro, the local sealing leader used a ring that depicts a cult procession. But this ring breaks down into *two* rings (CMS II.7 16, 17): two almost identical cult scenes of the same size but in two very slightly different versions. The Zakro sealing leader (or leaders) is using what we call "replica" rings: rings made intentionally similar in order to exercise some similar political or social authority. Impressions from such replica rings are found in all of the main LM IB sealing deposits (Betts 1967) and now on LC I Thera, too (Doumas 2000).

Some scholars argue that the replica rings—many of which were large metal rings, often with cult scenes or of bulls and bull leaping—are no more than reflections of fashion or of craftspersons simply repeating themselves (Pini 2006; Krzyszkowska 2005, 141–42, 188–92). However, this is to miss our most important evidence for the activities of social and political elites at this time. For the issue is not the mere existence of slightly different large metal rings but how they are *used*. Because of the Zakro habit of stamping nodules with two or even three different seal impressions, we can see replica rings in action (Figure 24.3): a cult ring used by the sealing leader at Zakro

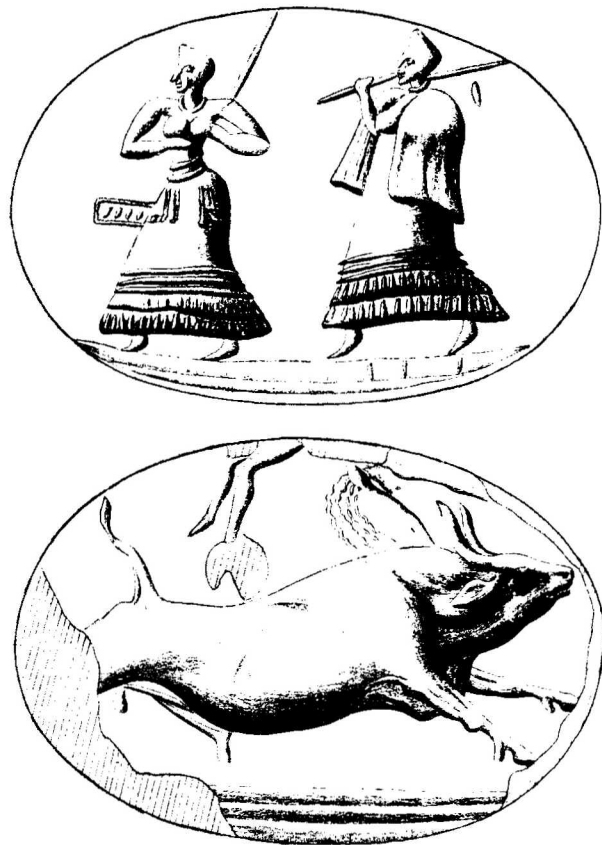


Figure 24.3. Cult Scene + bull leaping, Document sealings stamped by two gold rings, Zakro House A (CMS II.7 16 + 37; photo courtesy CMS).

is paired with another replica ring, in this case a bull-leaping ring; both the cult ring and the bull-leaping ring, in fact, break down into two almost identical rings always paired together (= CMS II.7, 16 + 37/CMS II.7, 17 + 38). Since they can hardly have been distinguished in sealing practice, it follows that it cannot have mattered which of the two (or four) had written, sent, or sealed these documents (Weingarten 1993). The simplest explanation is that the cult rings are nearly identical because they are used by people having the same rank or duties—and so, too, are the two bull-leaping rings.

The quality and imposing imagery of the best of these rings indicate a central palatial workshop, probably at Knossos. This need not mean Knossian political control of large parts of the island, still less of Thera: Current evidence suggests

no more than documents and messengers moving back and forth between LM I sites under the authority of a select group of ring owners (Weingarten 1991; *pace* Betts 1967).

FINAL PALACE SEALS AND SEALINGS

If we had only seals to go by, we would never have guessed that the Mycenaean took control of Crete in LM III/IIIA. Undoubtedly many artisans survived the great destructions and ensured glyptic continuity. One striking example (CMS VII, 113, 162. II.3, 212) shows three rock crystal gems of the same size (± 2 cm) treated by three different stylistic groups: The composition is virtually identical—a standing bull, regardant, palm tree in front, figure-8 shield below—but, if the stylistic dating is correct, they were engraved sequentially, probably from late LM I to LM IIIA (Younger 2000, 353 and figures 8–10). It may well be that the seals were made intentionally similar for persons of the same bureaucratic level, even as administration switched from Minoan to Mycenaean hands.

Nonetheless, craftspersons inevitably responded to the new political situation. Among the large group of Spectacle-Eye seals (LM II(?)–LM IIIA₁), some show continuity with the Minoan past, but many seem to take explicitly new directions: (1) using otherwise unusual lapis lacedaemonius and Near Eastern black haematite; (2) developing distinctive, conventional compositions, such as animal pairs in symmetrically reversed and mirror-image poses; and (3) creating emblematic themes, most strikingly, the Minotaur—perhaps the origin of the best-known Cretan myth (Younger 2000, 349–51). These innovations might be meant to personify early Mycenaean rule at Knossos—a difficult proposal to prove but a stimulating one to think about.

The Knossos sealings, on the other hand, are good indicators of regime change—most obviously those inscribed in Linear B, signaling the arrival of another new script. Document sealings disappear: The Mycenaean apparently had no need for those documents so necessary to Minoan administration. Changes in the sealing pattern, too, indicate that the sealings no longer represent internal storeroom management (as did most Minoan deposits) but probably a tax-based or tributary system with sealed goods arriving at the palace from elsewhere (Weingarten 1994, 184–87).

Shortly before the fall of the palace, a new glyptic style began to emerge. A very large metal ring impression depicting two winged griffins attacking a stag (CMS II.8, 192) belongs within the Rhodian Hunt Group (RHG), characterized by elongated, 'scooped out' animal bodies in mannered, elegant poses (Younger 1987, 63–64; Aruz 2008, 204–205; Pini 1986). The RHG seals are better known from the islands and Greek mainland in LM IIIA₂–IIIB, the last workshop to have carved hard-stone seals in the prehistoric Aegean (Younger 1979, 97). The style reappears in Cypro-Aegean glyptic: On a haematite cylinder now in the Metropolitan Museum of Art, the small Master of Animal scene in the upper field is clearly extracted from a Minoan lentoid,

and the stag below is remarkably similar to that on the Knossos ring impression (Weingarten 1996; Aruz 2008, 218–19, figure 434). The RHG scooped-out animal style thus began at Knossos. It may have been the fall of the palace that sent gem engravers fleeing eastward toward Cyprus, where they or their immediate descendants went on to influence the iconography and style of Cypro-Aegean glyptic.

With the fall of the palace of Knossos, a thousand years of Minoan seals comes to an abrupt end.

BIBLIOGRAPHY

- Alexiou, Stylianos, and Peter M. Warren. 2004. *The Early Minoan Tombs of Lebena, Southern Crete*. SIMA 30. Sävedalen, Sweden: Åström.
- Aruz, Joan. 2008. *Marks of Distinction: Seals and Cultural Exchange between the Aegean and the Orient (ca. 2600–1360 B.C.)*. CMS Beiheft 7. Mainz: von Zabern.
- Betts, John. 1967. "New Light on Minoan Bureaucracy: A Re-examination of Some Cretan Sealings." *Kadmos* 6: 15–40.
- Boardman, John. 1970. *Greek Gems and Finger Rings*. London: Thames and Hudson.
- Doumas, Christos. 2000. "Seal Impressions from Akrotiri, Thera: A Preliminary Report." In *Minoisch-mykenische Glyptik*, 57–65.
- Fiandra, Enrica. 1968. "A che cosa servivano le cretule di Festòs." In *Proceedings of the 2nd International Cretological Congress*, 383–95. Athens: University of Crete.
- Hallager, Erik. 2000. "New Evidence for Seal Use in the Pre-palatial and Protopalatial Periods." In *Minoisch-mykenische Glyptik*, 97–105.
- Heath-Wiencke, Martha. 1976. "Clay Sealings from Shechem, the Sudan, and the Aegean." *JNES* 35: 127–30.
- Hitchcock, Louise. Forthcoming. "Monumentalizing Hierarchy: The Significance of Architecture in the Emergence of Complexity on Minoan Crete." In *Proceedings of the 10th International Cretological Congress, Khania*.
- Hood, Sinclair, and Victor E. G. Kenna. 1973. "An Early Minoan III Sealing from Knossos." *Antichità Cretesi: Studi in onore di Doro Levi* 1, *Cronache di Archeologia* 12: 103–106.
- Krzyszowska, Olga. 2005. *Aegean Seals: An Introduction*. BICS Suppl. 85. London: Institute of Classical Studies.
- Macdonald, Colin F., and Carl Knappett. 2007. *Knossos Protopalatial Deposits in Early Magazine A and the South-west Houses*, BSA Suppl. 41. London: Institute of Classical Studies.
- MacGillivray, J. Alexander. 2000. *Minotaur: Sir Arthur Evans and the Archaeology of the Minoan Myth*. London: Jonathan Cape.
- Panagiotaki, Marina. 1993. "Sealings from the Olive Press Room, Knossos: New Information from the Unpublished Notes of Sir Arthur Evans." *BSA* 88: 29–47.
- . 1999. *The Central Palace Sanctuary at Knossos*, BSA Supplementary Volume 31. London.
- Pini, Ingo. 1986. "Nochmals zu einem tönernen Siegelabdruck des Museums Iraklion." In *Philia epi Georgion E. Mylonan*, 300–303. Athens: Library of the Archaeological Society of Athens.
- . 1990. "The Hieroglyphic Deposit and the Temple Repositories at Knossos." In *Aegean Seals*, 33–54.
- . 2006. "Look-alikes, Copies, and Replicas." In *Pepragmena Th' Diethnous Kritologikou Synedriou (Proceedings of the 9th International Cretological Congress)*, *Elounta*, 1–6 October 2001. A3: *Proistoriki Periodos, Techni kai Latreia, Elounda*, ed. Eugenia Tampakaki and Agisilaos Kaloutsakis, 51–64. Irakleio: Etairia Kritikon Istorikon Meleton.
- Rehak, Paul, and John G. Younger. 2000. "Minoan and Mycenaean Administration in the Early Late Bronze Age." In *Administration Documents in the Aegean and Their Near Eastern Counterparts*, ed. Massimo Perna, 277–301. Turin: Centro internazionale di ricerche archeologiche antropologiche e storiche.
- Sakellarakis, Ioannis A. 1976. "Χρονολογημένα σύνολα μινωικών σφραγίδων τις Αρχάνες." *Proceedings of the 4th Cretological Congress (Heraklion)*, 510–32. Irakleio: Etairia Kritikon Istorikon Meleton.
- . 1980. *Gruppen minoischer Siegel der Vorpalatzzeit aus datierten geschlossenen Funden*. JRGZM 27, 1–12.
- Sbonias, Konstantinos. 1995. *Frühkretische Siegel*. BAR-IS 620. Oxford: Tempus Reparatum.
- . 2000. "Specialization in the Early Minoan Seal Manufacture: Craftsmen, Settlements, and the Organization of Production." In *Minoisch-mykenische Glyptik*, 277–93.
- Schoep, Ilse. 2005. "The Socio-economic Context of Seal Use and Administration at Knossos." In *Knossos*, 283–93.
- Vlasaki, Maria, and Erik Hallager. 1995. "Evidence for Seal Use in Pre-palatial Western Crete." In *Sceaux minoens et mycéniens*, ed. Ingo Pini and Jean-Claude Poursat, 251–70. CMS Beiheft 5. Mainz: von Zabern.
- Warren, Peter. 1972. *Myrtos, an Early Bronze Age Settlement in Crete*. Athens: British School of Archaeology at Athens.
- Watrout, L. Vance, Despoina Hadzi-Vallianou, and Harriet Blitzer. 2004. *The Plain of Phaistos: Cycles of Social Complexity in the Mesara Region of Crete*. Los Angeles: University of California at Los Angeles, Institute of Archaeology.
- Weingarten, Judith. 1988. "Seal-use at LM IB Ayia Triada: A Minoan Elite in Action, II: Aesthetic Considerations." *Kadmos* 27: 81–114.
- . 1991. "Late Bronze Age Trade within Crete: The Evidence of Seals and Sealings." In *Bronze Age Trade*, 303–24.
- . 1993. "The Multiple Sealing System of Minoan Crete and Its Possible Antecedents in Anatolia." *Oxford Journal of Archaeology* 11: 25–37.
- . 1994. "Sealings and Sealed Documents at Bronze Age Knossos." In *Labyrinth of History*, 171–88.
- . 1995. "Sealing Studies in the Middle Bronze Age. III; The Minoan Hieroglyphic Deposits at Malia and Knossos." In *Sceaux minoens et mycéniens, IVe Symposium International 10–12 septembre 1992, Clermont-Ferrand*, ed. Walter Müller, 285–311. CMS Beiheft 5. Mainz: Akademie der Wissenschaften und der Literatur.
- . 1996. "The Impact of Some Aegean Gem Engravers on Cypriot Glyptic Art: Thoughts on a Chicken or Egg Problem." In *Minotaur and Centaur: Studies in the Archaeology of Crete and Euboea Presented to Mervyn Popham*, ed. Don Evely, Irene Stavros Lemos, and Susan Sherratt, 79–86. BAR-IS 638. Oxford: Tempus Reparatum.
- . 2003. "A Tale of Two Interlaces." In Yves Duhoux, ed., *Bricciaka: A Tribute to W. C. Bricc*. *Cretan Studies* 9: 285–99.
- . Forthcoming. "Some Early Unstamped Sealings from EM IIB Palaikastro." In *Proceedings of the 10th International Cretological Congress, Khania*.

- . 2005. "How Many Seals Make a Heap: Seals and Interconnections on Prepalatial Crete." In *Emporia*, 759–66.
- , and Colin F. Macdonald. 2005. "The Earliest Administrative Sealed Documents from Knossos (MM IB): Three Noduli in the so-called Early Magazine A. In *Studi in Onore di Enrica Fiandra*, ed. Massimo Perna, 393–404. Paris: De Boccard.
- Younger, John G. 1979. "The Rhodian Hunt Group." In *Papers in Cycladic Prehistory*, ed. Jack L. Davis and John F. Cherry, 97–73. Institute of Archaeology, Monograph 14. Los Angeles: University of California at Los Angeles, Institute of Archaeology.
- . 1987. "Aegean Seals of the Late Bronze Age VI." *Kadmos* 26: 44–73.
- . 1988. *The Iconography of Late Minoan and Mycenaean Sealstones and Finger Rings*. Bristol: University of Bristol Press.
- . 2000. "The Spectacle-eyes Group: Continuity and Innovation." In *Minoisch-mykenische Glyptik*, 348–60.
- Yule, Paul. 1980. *Early Cretan Seals: A Study of Chronology*. Marburger Studien zur Vor- und Frühgeschichte 4. Mainz: von Zabern.

CHAPTER 25

MYCENAEAN SEALS
AND SEALINGS

JOHN G. YOUNGER

AFTER the introduction of a sealing system from the Near East into southern Greece in the Early Helladic period (see Wiencke, this volume) and the destruction of that culture ca. 2200 BCE, there is no demonstrable sign of seal use on the Greek mainland until the sudden appearance of seals in the Mycenaean Shaft Graves at the end of the Middle Helladic period.

After the Shaft Grave period, seals are known on the Greek mainland, but there is almost no evidence that seals are being carved there, with the possible exception of the Mycenaean Vapheio group (mentioned later). A stone mold for a gold ring found in a tomb at Eleusis (*CMS* V, 422) constitutes the slim evidence for the making of seals on the Greek mainland (cf. Evely 1993, 146–71).

Perhaps almost all seals used on the Greek mainland in the Late Bronze were made in Crete. Certainly the seals in most stylistic groups cluster predominately in Crete, and after the fall of Knossos brought an end to hard stone seal engraving (ca. 1300 BCE; Weingarten this volume), the administrators at Mycenaean and Pylos used heirloom seals to impress sealings (Younger 1981a). Furthermore, after the fall of Knossos, Mycenaean produced the Mainland Popular group, a series of beads in soft stones and glass that look like seals but were (almost) never used administratively (Younger 1987a; Pini 1995; Dickers 2001). One might say, then, that the Mycenaean used seals in imitation of Minoan seal use but that tradition sat thinly on Mycenaean culture.

- Wilson, David E., and Peter M. Day. 1994. "Ceramic Regionalism in Prepalatial Central Crete: The Mesara Imports at EM I to EM II A Knossos." *BSA* 89: 1–87.
- . 2000. "EM I Chronology and Social Practice: Pottery from the Early Palace Tests at Knossos." *BSA* 95: 21–63.
- Younger, John G. 1983. "Aegean Seals of the Late Bronze Age: Masters and Workshops: II. The First-generation Minoan Masters." *Kadmos* 22(2): 109–36.
- Yule, Peter. 1980. *Early Cretan Seals: A Study of Chronology*. Marburger Studien zur Vor- und Frühgeschichte 4. Mainz am Rhein: von Zabern.
- Zachos, Konstantinos. 2007. "The Neolithic Background: A Reassessment." In *Metallurgy in the Early Bronze Age Aegean*, ed. Peter M. Day and Roger C. P. Doonan, 168–206. Sheffield Studies in Aegean Archaeology 7. Oxford: Oxbow.

CHAPTER 30

MINOAN POTTERY

BIRGITTA HALLAGER

ALTHOUGH major subsequent modifications and revisions have been made to Arthur Evans's pottery sequence, his suggested tripartite division of the Neolithic and the Minoan period is still by and large in use. Most scholars are also using a parallel, broader, and more simplified division of the Minoan era: the Prepalatial (EM I–MM IA), Protopalatial (MM IB–MM IIIA), Neopalatial (MM IIIB–LM IB), Final palatial (LM II–LM IIIB1) and Postpalatial (LM IIIB2–LM IIIC/Subminoan) periods.

Only the most important novelties and characteristic traits in each period are highlighted in this chapter, and it must be emphasized that "a specific period is defined not only by the exclusive presence of certain features but by the fact that some wares are common while others are just beginning or ending their periods of greatest popularity" (Betancourt 1985, 21). References to sites with pottery characteristic of the different periods can be found in Betancourt (1985) with additional new sites in Momigliano (2007b).

NEOLITHIC

Evans divided the Neolithic period into Early, Middle, and Late periods. Subsequently, the Early Neolithic has been subdivided into two phases (Furness 1953; J. D. Evans 1964) and the Late Neolithic period into three phases: Late Neolithic I, II, and Final Neolithic (Manteli 1993). Recently Tomkins (2007) has presented a complete revision of Neolithic Knossos that he has subdivided into nine phases. The beginning of the Early Neolithic I period has been dated to ca. 6500 BC. All Neolithic vessels

are handmade and fired to a relatively low temperature. Their surfaces are dark burnished or polished. So far only Knossos has produced the whole pottery sequence for the Neolithic period.

In Early Neolithic I, large and small bowls are the most common shapes, but other shapes include hole-mouthed jars, low-collared jars, flat-based mugs, and flared cups. Various types of handles are present, such as strap handles on bowls and jars, pairs of 'ears' on bowls, and wishbone handles. Some vessels have plastic decoration in the form of pellets and cordons, while others have an incised decoration in the form of short horizontal lines, stripes, and triangles. Typical for this period is the so-called pointillé decoration, which usually consists of incised zigzag or straight lines filled with small pricked dots. Early Neolithic I pottery is confined mainly to Knossos.

Different shapes of bowls and jars are also made in Early Neolithic II, but flat-based mugs are rare and disappear thereafter. House models (legged receptacles) and 'shuttles' decorated with incised lines and/or pointillé decoration occasionally occur. Plastic cordons are rare, and pellets are no longer in vogue, while incised decoration continues with many new motifs like 'barbed wire,' herringbone, tree, rows of chevrons, zigzag lines, and hatched lozenges. Although a few vases burnished with rippled lines were present in the former period, they are somewhat more common in Early Neolithic II. Scribble Burnished Ware is common.

Several Early Neolithic shapes continue in the Middle Neolithic period, including house models and 'shuttles.' Among new introductions, we find flared cups with a flat base, shallow lids, ladles with pronged wishbone handles, pedestal bowls, bridge-spouted bowls, and cylindrical vessels with an opening in the side. Pointillé decoration, Rippled, and Scribble Burnished Ware decline toward the end of the period, while pottery with incised decoration increases. The variety of motifs, including hatched triangles, branches, lozenge chains, horizontal ladders, rope patterns, and 'sewn' motifs, is much greater than in the previous period and continue to be linear, usually in continuous horizontal friezes.

Most of the shapes in the Late Neolithic period are known from the previous period, but they become more varied than before. We find a variety of carinated bowls and jars, hole-mouthed and collared jars, as well as specialized vessels like pyxides and tall, one-handed, small-diameter vessels that may have a pointed, flat, or pedestal base. Flared bowls with a small, triangular wishbone handle projecting above the rim are also typical for the period. All main incised motifs from the previous period continue but decrease toward the end of Late Neolithic, when several new types of impressed decoration appear (e.g., pattern jabbed, triangular jabbed, borderless punched ladder).

Features from the Late Neolithic as defined from Knossos continue in Final Neolithic, along with several new features. Closed shapes like jug and jars become much more frequent. New shapes include two-handled globular vessels with narrow tall neck (bottles), pyxides with tall horned lids, footed cups, cups and bowls with horns flanking the handle, and bowls or basins with a row of holes (so-called cheese pots). Incised decoration continues, but it is not very common, and almost all types

of jabbed decoration disappear. Few are scribble burnished or have burnished patterns. Final Neolithic is the best represented of all of the Neolithic phases.

EARLY MINOAN

Evans (1904, figure 7) published an idealized section of the tripartite division of the Early Minoan period at Knossos, but he did not find a single stratigraphic sequence for this division. It was not until the early 1960s, due to stratigraphic tests, that the Early Minoan I, II, and III periods could be clearly defined (Hood 1962, 1966). Further tests made in the early 1970s made it possible to separate EM II at Knossos into two subphases, EM IIA and EM IIB (J. D. Evans 1972; Warren 1972a). In addition, EM III has been a controversial ceramic period, but most scholars today agree that it is a proper ceramic phase, although it presently is recorded at only a few sites (Momigliano 2007a, 79–80).

The Scored (or Wiped) Ware is characteristic of the Early Minoan I deposits across the island. The surface of the vessels is decorated with rough vertical, diagonal, or horizontal lines wiped in the moist clay. The most common pattern-wiped shape is the large globular jug with wide-mouthed neck and rounded or flat bottom, but other shapes like bowls, collared jars, and cooking pots are also present. The so-called Pyrgos Ware is also typical of the period. It has a dark gray burnished surface, often with pattern-burnished decorations. The two most distinctive shapes in this ware are the chalice and the pedestal bowl; less common are jars, pyxides, cups, and jugs.

Another fine ware is the so-called Agios Onouphrios Ware. Groups of vertical, diagonal, or horizontal lines are painted in red, sometimes shading to brown, on a buff ground. The jug with a globular body and a high cut-away spout seem to be the favorite shape in this Dark-on-Light Ware. Other shapes include cups, bowls, teapots, two-handled globular vessels with a low to tall neck (tankards), askoi, pyxides, and animal-shaped vessels. Presently this Dark-on-Light Ware occurs mainly in central Cretan sites, while vessels with a white on red decoration, the so-called Lebena Ware, seems restricted mainly to southern Crete.

Pottery inspired by Cycladic incised vessels are mainly found on the north coast of Crete. Finally, two important shapes that continue throughout the remainder of the Minoan period appear in the Early Minoan I settlements: the cooking dish (baking plate) and the pithos.

Early Minoan IIA is divided into two subphases at Knossos (Wilson 2007, 56–69), but this division is presently not discernable at other sites. Unpivoted turntables, probably used in pottery production, have been found in the settlement at Myrtos (Warren 1972b), but the vessels are still handmade. Vessels made in a Fine Gray Ware, often incised with diagonal lines, herringbone, punctuations, and semi-circles in horizontal bands, are confined mainly to this period. The pyxis with short

neck, vertically pierced lugs, and sometimes footed or with tripod legs is a favorite shape, but other shapes include bowls, stemmed goblets, and strainers; in tombs we often find miniature vessels.

Dark-on-Light Wares are also appreciated in several parts of the island. One of these, the so-called Koumasa Ware, is recognized by its linear decorations, which usually include hatched or crosshatched motifs, but several other motifs, like the butterfly motif, solid triangles, and groups of diagonal lines, are used on shapes like cups, bowls, jugs, teapots, jars, goblets, and askoi. Foreign shapes, like the sauceboat (known on the contemporary mainland and the Cyclades), are introduced in this period.

Dark-on-Light Wares continue in Early Minoan IIB, and Red/Brown/Black Burnished Wares are quite common, especially in east Crete. Light-on-Dark Wares—usually white paint on a red or black slip—are also produced. While there are good ceramic links across the island in Early Minoan I–IIA, they are somewhat more difficult to trace in Early Minoan IIB. Perhaps the best candidate for a pan-Cretan style in this period is the so-called Vasiliki Ware, which is largely a feature of this period. The surface of the vessels is slipped, burnished, and fired so that it varies from red to brown to black. This mottled decoration is found on a large variety of shapes foremost on jugs with a high cut-away spout, goblets, and teapots, but other shapes include shallow bowls, spouted, conical bowls, bridge-spouted jars, and several types of cups. Mottled pottery occurs in western and central Crete but is most common in the eastern part of the island. Its enigmatic techniques of manufacture have been much debated (Betancourt et al. 1979).

Early Minoan III seems presently to be a time of isolation and strong regionalism. Dark-on-Light Ware, with vessels decorated with linear designs, is produced alongside what is perhaps the most characteristic ware in this period: Light-on-Dark Ware. Vessels from western and central Crete are sparsely adorned with simple lines, often with only horizontal bands. In the eastern part of the island, however, the light-on-dark decorations are more varied, with motifs like spirals, quirks, semi-circles, dot bands, hatched lozenges, paneled patterns, and circles, which are often combined in bold, ornamental ways. Shapes like goblets, tumblers, rounded and conical cups, bowls, and jugs with cut-away spouts are common, but others like teapots, jars, and undecorated, coarse storage and cooking vessels are also produced. The one-handled cup, which becomes the most common drinking vessel in the Middle and Late Minoan periods, is introduced in this period.

MIDDLE MINOAN

At Knossos, the Middle Minoan period has been divided into six pottery phases. The subdivision of MM II can presently best be distinguished at sites associated with the palace workshops, whereas it is more difficult in provincial contexts. The

subdivision of Middle Minoan III outside Knossos is presently also somewhat problematic, as very few sites have provided a clear stratigraphy for this division. Another 'problem' appeared when the Middle Bronze Age material from the old palace at Phaistos was divided into four phases (Levi 1960, 1976) that could not immediately be synchronized with Evans's division. These phases have subsequently been resorted (Fiandra 1962, 1980; Levi and Carinci 1988), but there is still some confusion in the literature (MacGillivray 2007, 105–106). There are many regional styles in this period, and only some are mentioned here.

The Middle Minoan IA period is usually defined by the presence of polychrome decoration—separating it from the Early Minoan III period—and the absence of wheel-made pottery, which was introduced in the following Middle Minoan IB period. Dark-on-Light Wares are still produced, alongside the Light-on-Dark Ware of Early Minoan III, which was particularly long lived in the eastern part of the island. The introduction of red paint (together with white) on the dark surface (Polychrome Ware) is a salient feature of the period. Many shapes known from EM III continue; straight-sided and carinated cups, however, are new additions. The enigmatic, so-called sheep bells are also new, but in spite of many suggestions, their function remains a mystery. Vessels with incised decorations like diagonal bands, zigzags, or crosshatched areas enjoyed a late revival.

The potter's wheel was introduced in Middle Minoan IB, but handmade and wheel-made vessels are often found side by side in the beginning. Dark-on-Light Ware continues to be popular, and several regional variations are discernable. The decorations are usually simple; for example, dipping, blot and trickle, and banding are common in the Mesara, while additional and somewhat more varied motifs like dots, groups of bands, sprays, chevrons, and occasionally zoomorphic and anthropomorphic designs appear in eastern Crete. Orange and yellow paint is added to the Polychrome Ware (Kamare Ware), which is usually adorned with linear motifs, but in the Knossos region we find patterns that may have been inspired by textiles.

Although the so-called Barbotine Ware is sparsely present before this period, the height of its popularity comes in the period MM IB–MM IIA. It is characterized by rough plastic reliefs on the surfaces of the vessels. Several types of decoration coexist, including large and small pellets, thin relief bands, and dabs of slurry (bar-nacle work). Barbotine decoration occurs especially on jugs, often in combination with white or polychrome painting. Incised decoration dies out at the end of the period.

Monochrome and Light-on-Dark Wares (adorned with white bands) continue in Middle Minoan IIA, but most attention has been drawn to the Polychrome (Kamare) Ware found at the two main palatial centers of its production, Knossos and Phaistos. Drinking and pouring vessels are the most common items, but other shapes like bowls and pyxides are also present. The sophisticated so-called Eggshell Ware is a hallmark of MM IIA: cups with walls less than 1 mm thick. Vessels with painted patterns and additional horizontally stamped or impressed designs, as well as those on which a device was used to print sponge, crescent, or seed patterns, are also made in this period. Another characteristic ware introduced in MM

IIA is the so-called Crude Ware. The small, rough vessels are mass produced on wheels in a fine buff ware. The shapes include shallow bowls, cups, juglets, pyxides, and conical cups. As the provincial pottery is usually a very simple version of the palatial styles, the synchronisms with other sites are presently somewhat tenuous.

The Polychrome (Kamare) Ware reaches its last flourishing period in Middle Minoan IIB. Drinking and pouring vessels are still the most common, but large storage jars, amphorae, rhyta, and many other specialized forms are in use. The repertoire and, not least of all, the combination of motifs seem almost endless. Spirals, petals, tendrils, rosettes, foliate bands, and chevrons are only a few of the many motifs often arranged in creative whirling and twisting compositions. It is not impossible that some of these motifs were borrowed from woven textiles; others come from the flora and fauna (e.g., trees, plants, octopi, fish). The repoussé technique is now used for the Stamped Ware: The thin wall of the vase is pushed from within over die stamps like circles, star or sun motifs, spirals, concentric circles, and shells, all of which leave the potter's fingerprint on the inside. Printed Ware and Crude Ware continue, as well as a variety of utilitarian coarse ware vessels, including pithoi.

Contrary to the polychrome and complex motifs of the preceding period, the Middle Minoan III pottery in general is adorned with simple and sober motifs, including flowers like lilies and crocuses. The subdivisions of the Middle Minoan III period are presently better defined in central Crete than in other parts of the island. Light-on-Dark Ware continues in Middle Minoan IIIA; at Knossos, cups with evenly spaced ridges are typical, and small, white-painted spots and spirals appear on shapes like cups, tumblers, and jugs. The bridge-spouted jar on an elongated foot may also belong to this period.

Dark-on-Light Ware decorated with ripple pattern seems to appear in this period, but it becomes more common in Middle Minoan IIIB on shapes like cups, bowls, and jars. Two new shapes are introduced: the so-called Vapheio cup and the in-and-out bowl. Light-on-Dark Ware decorated with white-painted motifs like spirals, irises, quirks, dots, and semicircles is also common. The very first stirrup jars appear in south central Crete. Middle Minoan III vessels in coarse fabrics include basins and specialized shapes like lamps, braziers, vats, cooking vessels, shallow dishes, and pithoi, which are more numerous than before.

LATE MINOAN

The Late Minoan period is subdivided into more pottery phases than any of the previous periods. Efforts to subdivide both LM IA and LM IB into an early and a late phase have turned out to be more confusing than helpful, as the arguments are based mainly on stylistic features rather than on stratigraphic evidence (Hatzaki

2007, 154–60). After some controversy, LM II has been established as a separate pottery phase, but so far it is found stratified in only a few sites. The differences between LM IIIA1 and LM IIIA2 pottery were defined in the 1970s, and the subdivision of LM IIIB into B1 and B2 was made in this millennium (Popham 1970; Hallager 2003a, 2003b). Problems remain concerning the subdivisions of LM IIIC. While LM IIIC early has been identified at several sites on Crete, the later part of the period is presently more diffuse, and the question is whether the so-called Subminoan period will eventually be regarded as the very last period of the Bronze Age or the first in the Iron Age.

Late Minoan IA is characterized by a strong ceramic regionalism. The long-lived Light-on-Dark Ware has almost disappeared in central Crete, although it is still quite common in the eastern part of the island. Dark-on-Light Ware is, however, the most prevalent, and in spite of several regional shapes and decorative motifs, ripple patterns become a hallmark of the period; other appreciated motifs include ripple patterns, foliate bands, and floral decorations. Monochrome cups are often present, and the number of plain conical cups increases. Several shapes of cups, jugs, and jars continue from the previous period, and the conservative cooking equipment cannot be more closely dated within LM I. The decorated cylindrical jar seems to be a new shape, and among the coarse-fabric vessels we now also find so-called fire-boxes, which may have been used in perfume making.

Several shapes and motifs continue in Late Minoan IB. Foliate bands, spirals, and floral decorations are still favorite motifs, together with wavy bands and semi-circles; in eastern Crete, red and white accessory ornaments are not unusual. The hallmark of the period is a group of vessels made in a style called the Special Palatial Tradition. They were probably produced in a Knossian workshop, and although there are rather few within the total LM IB material, they are crucial in separating the two LM I periods. Based on the vessels' iconography, the tradition has been separated into four subdivisions: the Marine Style, the Floral Style, the Geometric and Abstract Style, and the Alternating Style. As a new feature we find motifs arranged freely on the entire body of the vessel, and occasionally motifs from more than one style are combined. New LM IB shapes include the S-shaped bowl, the one-handled squat alabastron, and the baggy alabastron; among the several shapes of rhyta, the cup/rhyton seems to be the most common.

The repertoire of Late Minoan II shapes and motifs is so far best illustrated in the publication of the Unexplored Mansion at Knossos (Popham et al. 1984). Many shapes and motifs survive from the LM IB period, and in spite of several shapes that have been claimed to be newcomers in LM II, presently only the goblet can be pointed out. We find both plain and decorated goblets, the latter usually with a single motif (e.g., octopus, iris cross, triple Cs, rosette) on each side of the vessel and often with droplets on the rim. Tin-coated vessels like goblets, cups, jugs, and squat alabastra also appear as a new feature. Imports of Knossian LM II are occasionally found in the eastern part of the island, but presently the synchronisms with this area are somewhat problematic as the pottery here bears no resemblance to central or west Cretan products.

Central and west Cretan Late Minoan IIIA1 pottery is more or less influenced by the Knossian workshops, while the east Cretan workshops continued their own ceramic traditions. Important synchronisms are found at sites on the border between the two areas, where vessels from both worlds are found together. Repeated motifs framed by bands become standard; the most common are foliate bands, festoon patterns, alternating arcs, net patterns, foliate scrolls, and zigzags, which are often combined with additional rows of dots or framed by wavy bands. Pictorial decoration in the form of flowers, birds, and fish are found mainly on cups, pyxides, and baggy alabastra. A single motif on each side of the decorated goblet has gone out of fashion and is replaced by repeated motifs. New shapes include ledge-rimmed cups, incense burners with lids, amphoroid kraters, funnel-necked jugs, juglets, and the shallow bowl, the latter always undecorated.

In Late Minoan IIIA2, west and central Cretan workshops are in close contact, and although the eastern part of the island continued its local styles, the limit of west and central Cretan influence has moved somewhat farther east. Many repeated motifs continue from LM IIIA1 and are thus unreliable for dating purposes. Among the new shapes found in most of the island are the kylix, which has a long stem—in contrast to the short stem of the goblet—and often loop handles and the footed cup (also called champagne cup). Several shapes in fine ware, now including kylikes, footed cups, deep cups, jugs, jars, and kalathoi, are produced both in a plain and a decorated version. Decorated larnakes and bathtubs appear in the tombs, but they also have a domestic function, as witnessed by the many examples found in the settlements. Vessels in coarse fabric like cooking dishes and trays continue unchanged, but the old, straight-sided tripod cooking pot has finally been replaced by one with a globular body and a high everted rim; handles may be horizontal or vertical.

In the Late Minoan IIIB1 period, a close contact between all areas of Crete is finally established. Export of vessels from the Kydonian workshop reaches a peak now and also includes several sites in the east Cretan area. The quantity of large (transport) stirrup jars, a shape known from MM III, increases. By now they are produced in three areas—north-central, south-central, and western Crete—and are usually adorned with horizontal bands or high wavy bands; some have Linear B inscriptions. The repeated motifs, including alternating arcs, hatched lozenges and loops, festoons, chevrons, stylized shells, multiple arcs, whorl shells, spirals, and stylized flowers, are usually less densely packed. New shapes are added (e.g., the shallow kylix, the bowl with an upright profile, and small squat and conical stirrup jars); although a few small globular stirrup jars have occasionally appeared since LM I, they are now among the most commonly produced vessels.

Most shapes from LM IIIB1 continue in Late Minoan IIIB2, but type fossils like cups and bowls with flaring rims—in west Crete often with interior double rim bands and in central Crete with monochrome interiors—are found at several sites. The carinated cup is also a new LM III shape, and in west Crete the banded cup with high-slung handle is a new and prominent feature of the period. The motifs are simple and applied in a more spacious manner than in the previous period. They include paneled patterns in which the wavy border is often a component, antithetic

spirals, quirks, simple foliate bands, zigzags, wavy bands, isolated lozenges, multiple stemmed spirals, comb patterns, and above all concentric semicircles. Among the coarse-fabric pottery, finger impressions on the upper legs of tripod cooking pots appear for the first time.

The close cross-island contacts continue in Late Minoan IIIC early. Carinated bowls and kraters become popular, and a new (Mycenaean) technique of making small stirrup jars is quickly spreading across the island: The false neck/disc, modeled on a flat disc, is now made in solid clay and placed on a separately made body. Long handle attachments on kraters and pyxides and reserved rim bands on the interiors of bowls and kraters are new features. Vessels decorated in the so-called open style and close style appear simultaneously at the beginning of the period. Among the new motifs, we find the buttonhook and the tricurved streamer, and pictorial motifs including horses, fish, trees, and above all birds are not uncommon. Vertical slashes or finger impressions on the upper part of the tripod legs is now a pan-Cretan trait, and a new coarse-fabric shape appears: the dislike lid with a central, high, solid knob handle decorated with relief patterns, which was perhaps used as a damper.

It may eventually turn out to be crucial that the important settlement at Knossos, which was continuously inhabited in antiquity, so far has no deposits stratified between LM IIIC early and the so-called Subminoan period. Among the features that have been put forward as characteristic of Late Minoan IIIC late, we find stirrup jars with a cone top on the false disc and an airhole close to the neck or handle, bulging stems on kylikes, conical feet on cups, bowls, and stirrup jars, and the absence of large stirrup jars. These features seem to continue in the Subminoan period, and the question is whether we can separate LM IIIC late and Subminoan into two successive phases or whether they eventually are one and the same period.

NB: Several scholars in addition to those mentioned in this chapter have contributed to our present knowledge of Minoan pottery. They are far too many to be listed here, but a good up-to-date bibliography may be found in Momigliani (2007b).

BIBLIOGRAPHY

- Betancourt, Philip P. 1985. *The History of Minoan Pottery*. Princeton: Princeton University Press.
- , Thomas K. Gaisser, Eugene Koss, Robert F. Lyon, Frederick R. Matson, Steven Montgomery, George H. Myer, and Charles P. Swann. 1979. *Vasilike Ware: An Early Bronze Age Pottery Style in Crete*. Gothenburg: Åström.
- Evans, Arthur J. 1904. "The Palace of Knossos." *BSA* 10: 1–62.
- Evans, John D. 1964. "Excavations in the Neolithic Settlement at Knossos, 1957–60." *BSA* 59: 132–240.
- . 1972. "The Early Minoan Occupation of Knossos: A Note on Some New Evidence." *AnatSt* 22: 115–28.

- Fiandra, Enrica. 1962. "I periodi struttivi del primo palazzo di Festòs." Πεπραγμένα του Α' Διεθνούς Κρητολογικού Συνεδρίου, 112–26. Athens: Εταιρία Κρητικών Ιστορικών Μελετών.
- . 1980. "Precisazioni sul MM IIA Festòs." Πεπραγμένα του Δ' Διεθνούς Κρητολογικού Συνεδρίου, 169–96. Athens: Πανεπιστημιον Κρητης.
- Furness, Audrey. 1953. "The Neolithic Pottery of Knossos." *BSA* 48: 94–134.
- Hallager, Birgitta P. 2003a. "Late Minoan IIIB2 and Late Minoan IIIC Pottery in Khania." In *LH IIIC*, 105–16.
- . 2003b. "The Late Minoan IIIB:2 Pottery." In *The Greek Swedish Excavations at the Agia Aikaterini Square Kastelli, Khania 1970–1987 and 2001*. Vol. III:1, ed. Birgitta P. Hallager and Erik Hallager, 197–265. Skrifter utgivna av Svenska Institutet i Athen, 4°, XLVII:III:1. Stockholm: Åström.
- Hatzaki, Eleni. 2007. "Neopalatial (MM IIIB–LM IB): KS 178, Gypsades Well (Upper Deposit) and SEX North House Groups." In *Knossos Pottery Handbook*, 151–96.
- Hood, M. Sinclair F. 1962. "Stratigraphic Excavations at Knossos, 1957–61." Πεπραγμένα του Α' Διεθνούς Κρητολογικού Συνεδρίου, 92–98. Athens: Εταιρία Κρητικών Ιστορικών Μελετών.
- . 1966. "The Early and Middle Minoan Periods at Knossos." *BICS* 13: 110–11.
- Levi, Doro. 1960. "Per una nuova classificazione della civiltà Minoica." *La parola del passato* 15: 81–121.
- . 1976. *Festòs e la civiltà minoica*. Incunabula Graeca 60. Rome: Edizioni dell'Ateneo.
- , and F. Carinci. 1988. *Festòs e la civiltà minoica IIB*. Incunabula Graeca 77. Rome: Edizioni dell'Ateneo.
- MacGillivray, J. Alexander. 2007. "Protopalatial (MM IB–MM IIIA): Early Chamber beneath the West Court, Royal Pottery Stores, the Trial KV, and the West and South Polychrome Deposits Groups." In *Knossos Pottery Handbook*, 105–49.
- Manteli, Katya. 1993. The Transition from the Neolithic to the Early Bronze Age in Crete, with Special Reference to Pottery. PhD diss., Institute of Archaeology, University of London.
- Momigliano, Nicoletta. 2007a. "Late Prepalatial (EM III–MM IA): South Front House Foundation Trench, Upper East Well, and House C/Royal Road South Fill Groups." In *Knossos Pottery Handbook*, 79–103.
- , ed. 2007b. *Knossos Pottery Handbook*.
- Popham, Mervyn, R. 1970. *The Destruction of the Palace at Knossos: Pottery of the Late Minoan IIIA Period*. SIMA 12. Gothenburg: Åström.
- , J. H. Betts, M. Cameron, H. W. and E. A. Catling, D. Evely, R. A. Higgins, D. Smyth, et al. 1984. *The Minoan Unexplored Mansion at Knossos*. London: British School at Athens/Thames and Hudson.
- Tomkins, Peter. 2007. "Neolithic: Strata IX–VIII, VII–VIB, VIA–V, IV, IIIB, IIIA, IIB, IIA and IC Groups." In *Knossos Pottery Handbook*, 9–48.
- Warren, Peter. 1972a. "Knossos and the Greek Mainland in the Third Millennium B.C." *Athens Annals of Archaeology* 5: 392–98.
- . 1972b. *Myrtos: An Early Bronze Age Settlement in Crete*. BSA Suppl. 7. London.
- Wilson, David E. 2007. "Early Prepalatial (EM I–EM II): EM I Well, West Court House, North-East Magazines, and South Front Groups." In *Knossos Pottery Handbook*, 49–77.

CHAPTER 31

MYCENAEAN POTTERY

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SERIOUS study of Mycenaean pottery, the ceramic assemblage characteristic chiefly of the central and southern Greek mainland during the Aegean Late Bronze Age (ca. 1550, or possibly as early as 1650, until ca. 1050/1000 BC), began within a decade of the first discovery of substantial quantities of this artifactual class in the initial exploration of the chamber tomb cemeteries at Ialysos on Rhodes by Billiotti and Salzmann (1868, 1870) and Schliemann's better-known excavations at Troy (1870–1873, 1878–1879, 1882, 1890), Mycenae (1876), Tiryns (1884–1885), and Orchomenos (1880, 1886) (McDonald 1967; Mountjoy 1993, 1; Fitton 1996). Furtwängler and Löschcke were the first scholars to devote an entire book to the subject (1879), soon followed by a second, which incorporated many of Schliemann's recent findings at Tiryns (1886). But it was Blegen's careful stratigraphic excavations of 1915–1916 at the Corinthian coastal site of Korakou that first permitted virtually the full temporal range of Mycenaean ceramics to be outlined (Blegen 1921) by employing a tripartite chronological system modeled after that devised by Sir Arthur Evans for the Bronze Age pottery of Minoan Crete less than twenty years earlier.

The recovery of thousands of additional Mycenaean terracotta containers, especially intact or fully restorable vessels from tomb contexts, eventually made possible a definitive classification of the full typological range of Mycenaean ceramics during some ten stages of development spanning five centuries, thanks to publications by an international cast of excavators active in Greece during the 1920s and 1930s: Keramopoulos at Thebes, Kourouniotes and Mylonas at Eleusis, Marinatos on Kephallenia (Greece); Jannoray and Van Effenterre at Kirrha and Krisa (France); Karo at Mycenae (Germany); Maiuri and Iacopi at Ialysos (Italy); Frödin and Persson at Asine and Dendra (Sweden); Wace at Mycenae (United Kingdom); Blegen at Zygouries and Prosymna, Goldman at Eutresis, and Broneer at Athens (United States).