

THE CAMBRIDGE COMPANION TO
THE AEGEAN
BRONZE AGE



Edited by

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PLATE 5.3. Mirabello imported jar from Quartier Mu, Malta, Protopalatial. Photograph by Philippe Collet. Courtesy of the École Française d'Athènes and Jean-Claude Poursat.



PLATE 6.1. Gold finger ring from the Phournoi cemetery at Archanes, Tholos A, context LM III A1. Photograph by the authors.



PLATE 6.2. Phaisos palace, Central Court looking north to Mt. Ida. Photograph by the authors.

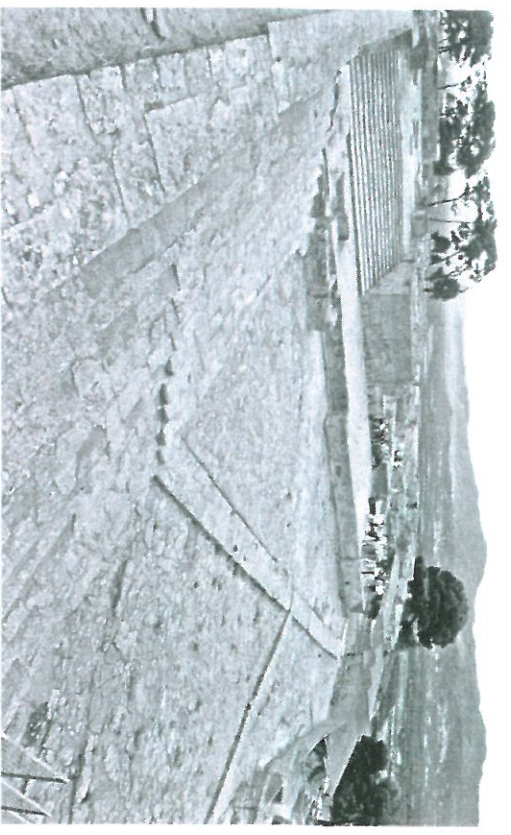


PLATE 6.3. Phaisos palace, West Court and Theatral Area. Photograph by the authors.



PLATE 6.4. Phairos palace, Istrial basin in the West Wing. Photograph by the authors.

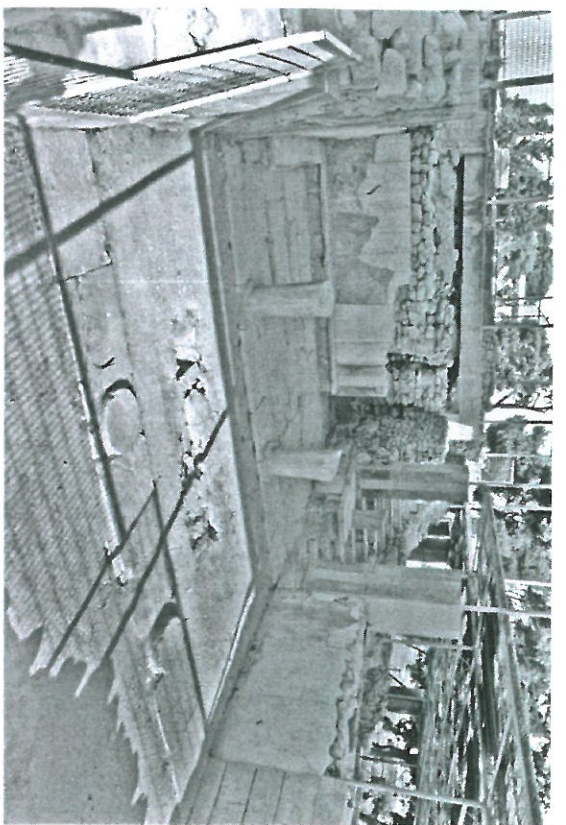


PLATE 6.5. Phairos palace, bench room in the North Wing. Photograph by the authors.



PLATE 6.6. Phaisos palace, polythyron in the North Wing. Photograph by the authors.

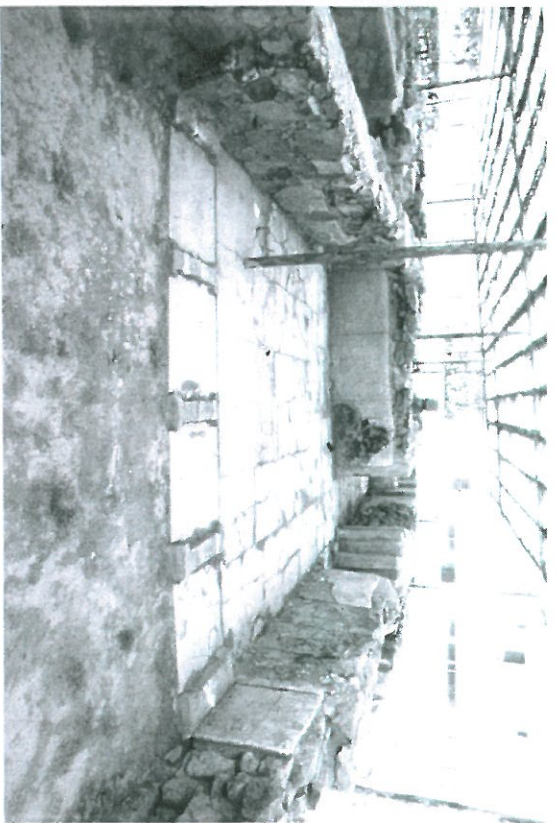


PLATE 6.7. Nirou Chani, polythyron entrance. Photograph by the authors.



PLATE 6.8. Marine style ewer from Poros, LM IB. Photograph by the authors.

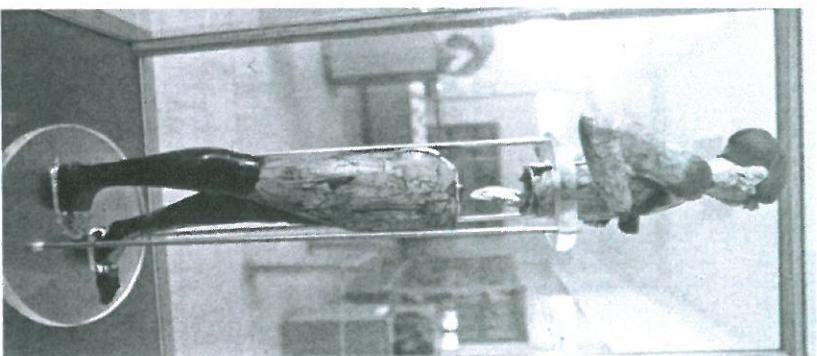


PLATE 6.9. Ivory youth from Palaikastro, side view. Photograph by the authors.



PLATE 6.10. Ivory youth from Palaikastro, detail of chest and left arm. Photograph by the authors.



PLATE 7.1. Stone relief ("Sanctuary") rhyton from Zakros. Photograph by the authors.

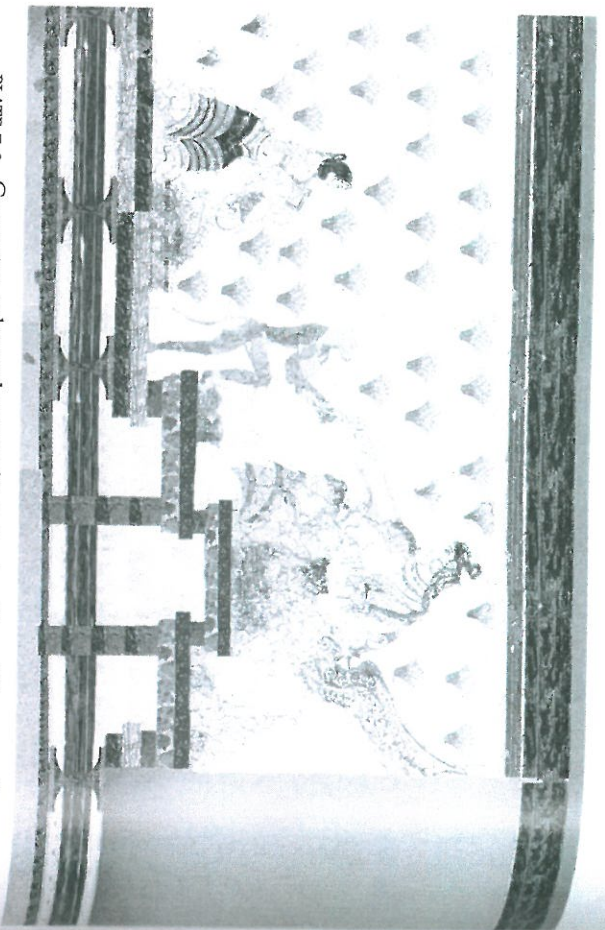


PLATE 7.2. Computer-enhanced reconstruction of the upper fresco from Xeste 3, Akrotiri, Thera. Photograph by the authors.

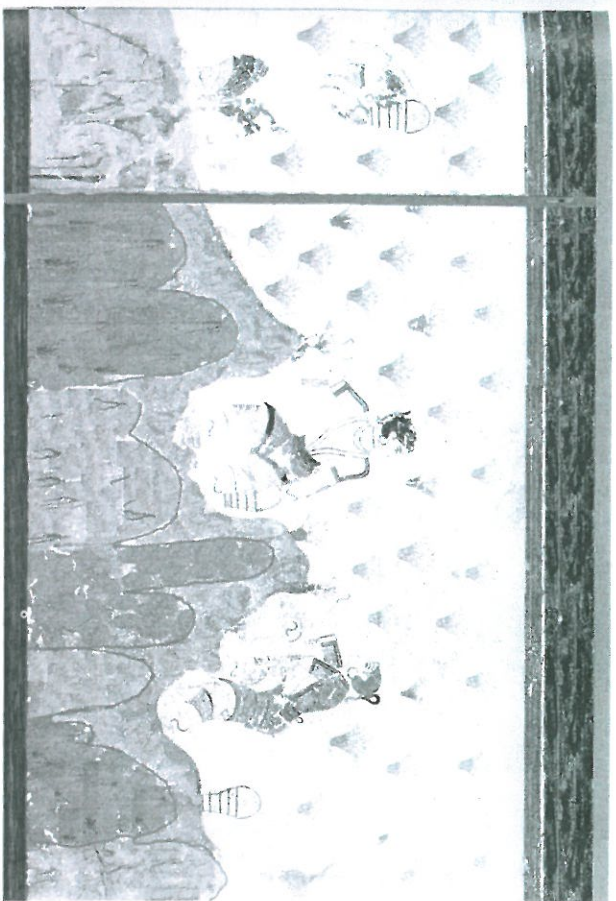


PLATE 7.3. Sealing ('Master Impression') from Chania, House A, obverse. Photograph by the authors.



PLATE 7.4. Archanes, Phournoi cemetery. Photograph by the authors.



PLATE 7.5. Linear A tablet from Zakros (KZ 8). Photograph by the authors.



PLATE 7.6. Sealing ("Master Impression") from Chania, House A, reverse, showing the wrapped "package." Photograph by the authors.



PLATE 7.7. Phaiistos Disc, side A. Photograph by the authors.

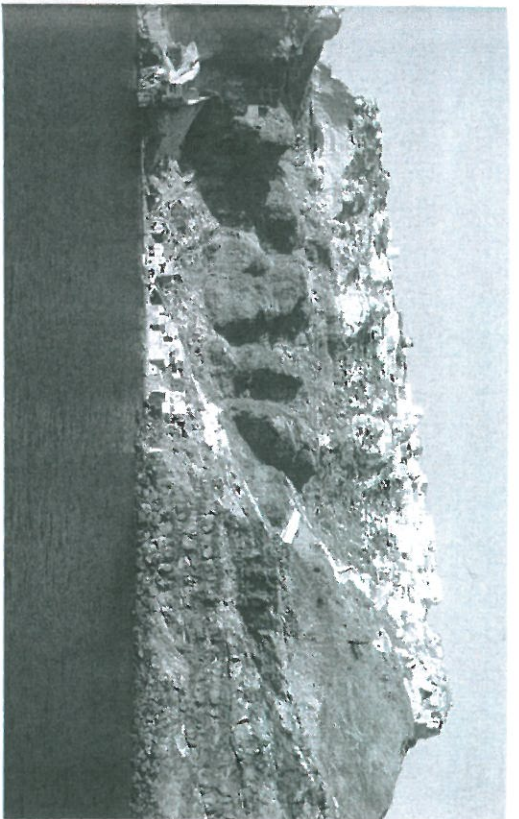


PLATE 8.1. Scarps of the caldera of the Thera volcano. Photograph by Susan G. Cole. Courtesy of the author.

6: THE MATERIAL CULTURE OF
NEOPALATIAL CRETE*John G. Younger and Paul Rehak*

GENERAL OUTLINE OF THE PERIOD

The Neopalatial (or New Palace) period followed the fire destructions at the end of the Protopalatial period (MM II) and continued until the fire destructions at the end of LM IB, which destroyed almost all administrative sites in Crete (the central palace building at Knossos was spared) and changed Minoan culture. The period is conventionally divided into a short MM III period, which is difficult to characterize, and a long LM IA period and LM IB that together may have been the highpoint of the Minoan civilization.¹

Early in the Neopalatial period the Minoans extended their cultural and administrative influence beyond Crete. By LM IA we see their presence in the Cyclades (especially Thera, Keos, and Melos; Ch. 8, pp. 189–97), in other islands such as Kythera and the northern Aegean island Samothrace, and on the west coast of Anatolia (Miletos; Chs. 8, pp. 198–200; 9, p. 217). Besides being long and rich, LM IA also saw the eruption of the Thera volcano late in the period (Ch. 1, p. 6). Theran pumice has been found at many Cretan sites, where sometimes it had been carefully collected and stored, and several sites were wrecked by earthquake and either remodeled (Petras east of Siteia) or abandoned (the farm complex at Vathyretro).² Other sites were simply abandoned, such as Galatas in the Pediada plain southeast of Knossos. More material dates to LM IB, simply because the fire destructions that closed the period were nearly total and apparently sudden; although no people were burned to death in the buildings, they left behind just about everything except their personal jewelry. We thus have a rich assortment of objects from the end of the period. Many art forms did

not survive the Neopalatial period, and the period that follows was so different in character that there was probably a significant change in culture. Mycenaean from the mainland may have been responsible, or they may have taken advantage of an existing situation on Crete (Ch. 12, pp. 310–16).³

SITES AND ARCHITECTURE

After the fires that destroyed many, if not most, of the Protopalatial settlements and palaces at the end of MM II, Neopalatial Crete experienced a burst of rebuilding and, we presume, reorganization. Much of the architecture took one of two major forms, a complex of buildings around a central court (the “palace”) or a square single unit (the “house”). There were, of course, variations on these forms, especially the “villa,” which was an imposing house, usually in the countryside, with secondary buildings, or even a village around it.

The old Protopalatial palaces at Knossos, Phaistos, and Malia were enlarged, given new and grander façades and West Courts, and outfitted with more spacious rooms (Figs. 6.1–6.4). Aside from their imposing new look, the main improvements included larger storage facilities, the more formal rooms with built benches (for counselors?), and **lustral basins** (below, p. 148; small sunken rooms of unknown function). New palaces were also designed where earlier there had been either none or some other type of building altogether: Zakros at the extreme eastern end of the island (Fig. 6.5), Ayia Triada in the Mesara (west of Phaistos, at the opposite end of the same ridge), and the smaller palaces at Galatas southeast of Knossos and at Petras on the north coast, just east of the modern city of Siteia. The term “palace” usually conveys royal images of kings and queens and courtiers; places where declarations and judgments are made and where audiences are held. It is possible to conjure up these images at Knossos, in a room with a stone throne flanked by stone benches. The other palaces contained rooms with benches but not thrones. Neopalatial palaces did have in common storage magazines, usually in the west wing, and a large central court.

Crete in the Neopalatial period was also surprisingly urbanized. Knossos, the palace and town, was the largest urban center, approximately a fifth of a square mile in extent, with a population of about 17,000 – a moderately sized modern town. Along the north coast, from modern Chania to Siteia, there would have been a string of palaces: presumably Chania and Rethymnon, where important buildings have been



FIGURE 6.1. Plan of Knossos palace. Plan by Dan Davis.

excavated, and then Knossos, Malia, Gournia, and Petras, all approximately 25–40 miles apart. Some traces of roads have been discovered, sometimes with watchtowers, and a whole string of small settlements, “villas,” and farms. Ships would also have made this journey, traveling along the north coast of the island from west to east, following the prevailing currents. Along the south coast ships traveled east to west, which explains the necessity of a palace at Zakros for ships coming from Cyprus that did not enter the Aegean. Continuing their journey from there, ships could then stop at Makrilyalos, the “villa” site of

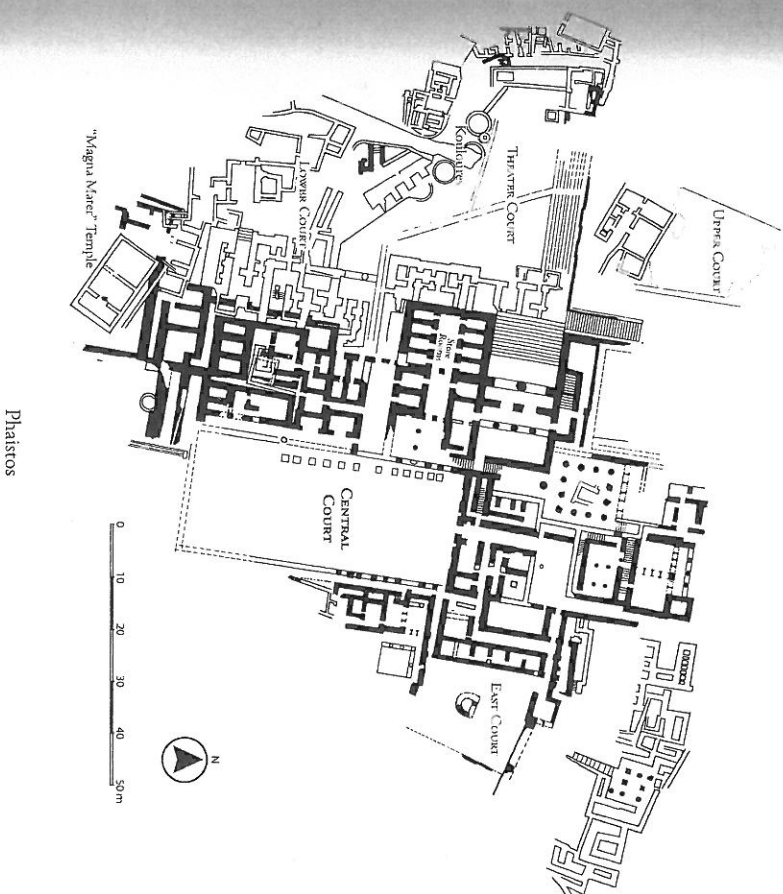


FIGURE 6.2. Plan of Phaistos palace. Plan by Dan Davis.

Pyrgos, and finally at Kommos, where Building T has the look of a palace. Farther to the west on the south coast there were few Minoan sites, and the mountainous and inhospitable southwest corner of Crete was virtually uninhabited. How ships traversed past this part of Crete is unknown. Perhaps they turned southwest toward Libya and thence toward Italy, or perhaps some of their goods were unloaded at Kommos and shipped north to Phaistos and across Crete to Knossos, as happened in Roman times when Gortyn, just to the east of Phaistos, was the capital of the province of “Crete and Cyrene” (in Libya).

Throughout much of Crete, apart from the palaces, were many small towns, villages, “villas,” and country houses or farms. Some of the small towns were located around the palaces, such as that on the hills that hem in the palace at Zakros; other towns seem not to have had a palace, such as the cluster of “villas” at Tylissos in the plain west

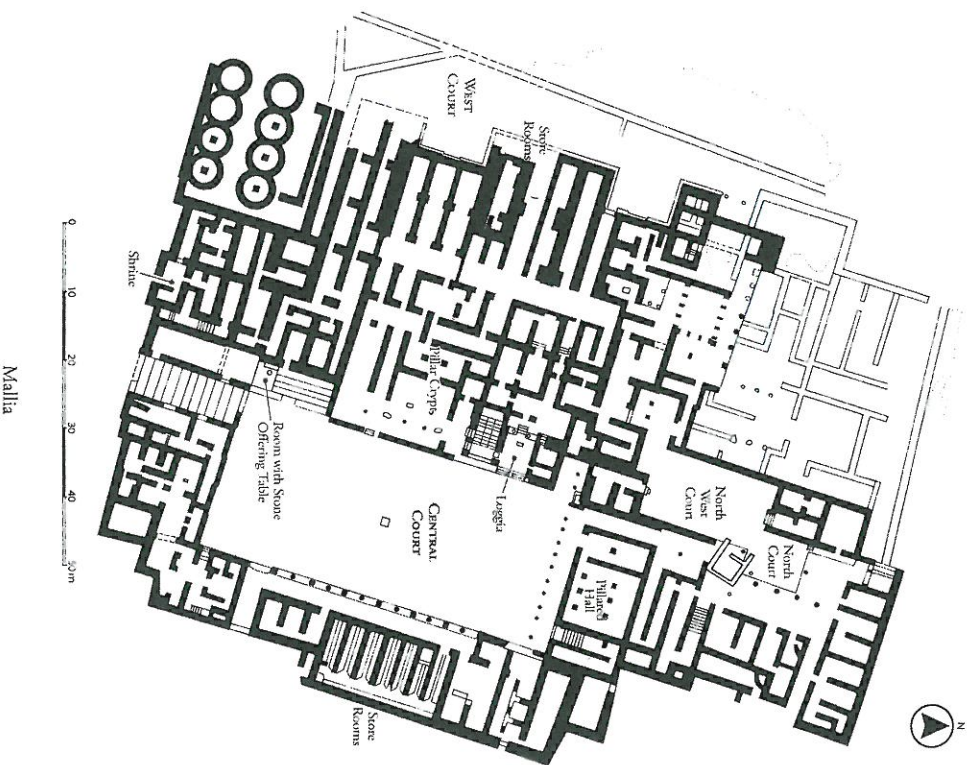


FIGURE 6.3. Plan of Malia palace. Plan by Dan Davis.

of Knossos and the spacious town by the sea at Palaikastro just north of Zakros. Gournia was a village of small (6–8 rooms) two-story houses, often sharing party walls; a small palace crowned the site. Gournia is the only site on Crete that has been completely excavated.⁴ Although the functions of most rooms cannot be determined, portable braziers indicate cooking and latrines were usually located below the stairs that led up to the second story. A network of alleys and stepped streets encircling the hill gave access to the houses.



FIGURE 6.4. Plans of Minoan palaces, at 1:2,000. Plans by Dan Davis.

Substantial buildings apparently not within towns have also been excavated. Most of these were farms, such as Kannia in the western Mesara, Zou up the river valley from Petras, and Ano Zakros on the plateau above Zakros. Zou had its own pottery kiln and Kannia and Ano Zakros had impressive storage magazines; one **pithos** (large storage jar) at Ano Zakros carries an inscription that starts with “WINE 32,”⁵ apparently stating its contents as 32 Minoan liquid units of wine (Ch. 7, p. 178). Vathyptero, at the south end of Mt. Iuktas and overlooking the Lykastos valley, consists of a large complex of buildings containing a shrine, a wine and olive press, and other industrial features. It is more

difficult to identify the function of other isolated buildings. Makrityialos looks in plan like a small palace, but probably was only one story; beyond the façade of its central court it becomes insubstantial. Sklavokampos, above Tyliossos on the main route to the sacred cave on Mt. Ida, looks like a typical farm: tucked into a corner of a moderate-sized plain, it had a nice front porch, a small storage area, and a large room apparently for farm animals. Upstairs were more rooms and below the stairs the latrine. A group of clay sealings (lumps of clay impressed by a seal; Fig. 1.3), fired to pottery hardness by the destruction of the building at the end of the Neopalatial period, was found inside the front door, presumably the contents of a chest that had fallen from the balcony above. These sealings had secured tightly folded parchment documents and were impressed by the gold finger rings of administrators, probably at Knossos (Pl. 6.1; Pl. 7.6; Ch. 1, p. 12; 7, p. 175).⁵

Most of the buildings conventionally called "villas" were large and nicely appointed two-story houses; a cluster of these could create an impressive neighborhood, such as the houses at Amnisos (including the Villa of the Lilies) and Nirou Chani on the coast east of Knossos, or they could form the focus of a small community, such as Nerokourou near Chania, or the "Country House" at Pyrgos on the south coast. Near most of these impressive houses were smaller structures, presumably service buildings.

For more detailed discussion of the two main building types we shall visit the palace of Phaistos and the house at Nirou Chani, mentioning conventional rooms, masonry styles, and building practices as we go. Phaistos lies on a plateau at the east end of a long ridge in the middle of the west end of the Mesara plain; its vistas are inspiring, east into the hazy grain fields of the Mesara and north to the double-horned peak of Mt. Ida (Pl. 6.2). The palace (Fig. 6.2) is large (about 120 m square or the size of two football fields side by side), but only about half as large as Knossos (Fig. 6.4). It is approached from the upper West Court and a staircase that descends into the lower West Court, renewed from the Protopalatial period, past a monumental set of stone bleachers that must have held a large audience for ceremonies that took place on the stone paving (Pl. 6.3). A broad stone staircase leads up to a tall porch supported by a huge wooden column resting on a column base made of gypsum.⁶ As we know from artistic representations, Minoan columns tapered from top to bottom, and their round capitals were somewhat like classical Doric column capitals with a crowning square (abacus) that supported the lintel above it. Beyond the column is a shallow antechamber whose massive back wall, made of large rectangular ashlar

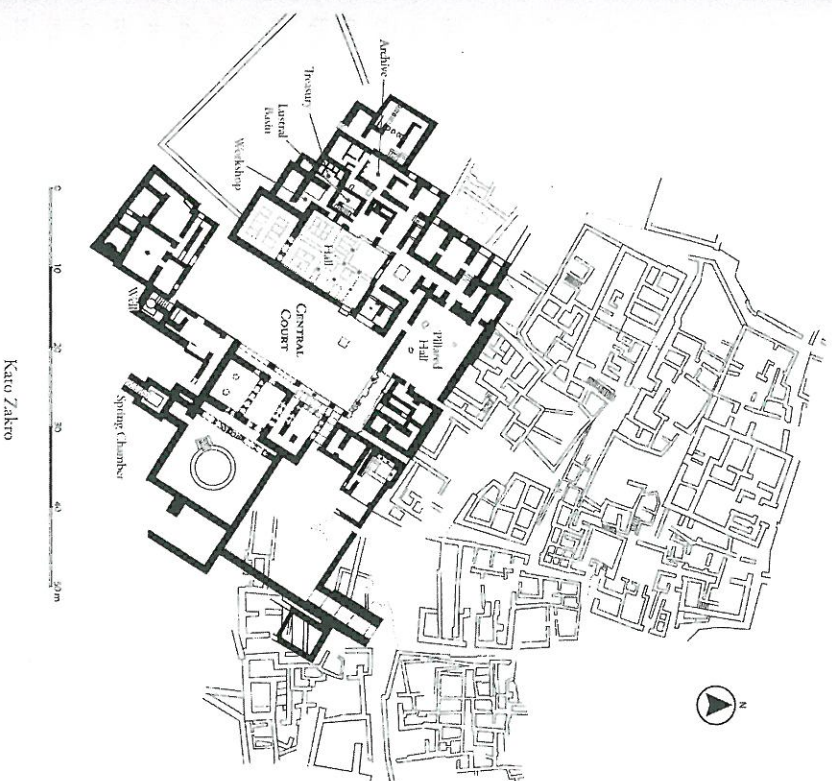


FIGURE 6.5. Plan of Zakros palace. Plan by Dan Davis.

cut blocks of a local creamy limestone called poros, is pierced by three doors. The stair, the porch, the column, and the massive wall beyond make a very imposing ensemble.

Beyond the antechamber, though, the grandiose entrance to the palace fizzles out. Behind the imposing massive back wall is a broader room supported by three narrower columns (implying a lower ceiling); immediately to one's left a narrow staircase ascends to rooms above, and off in the far back right corner another narrow staircase leads both up to similar rooms and down to the central court and the storage magazines. These magazines lie adjacent to the grand entrance and are themselves impressive. The masonry is again poros ashlar and the layout is remarkably regular: a long corridor supported by a poros ashlar pillar

leads to eight narrow storage rooms, four along each side. Here were stored grain, olive oil, wine, and other commodities in large pithoi that stood as tall as the Minoans themselves.

The central court is large (Pl. 6.2), about 27 m wide by 63 long (80 by 188 feet, or a little more than half the size of a United States football field); it is oriented almost due north and is open to the sky, and to the vista of Mt. Ida high above the two-story buildings that surround the court. The long sides (the southeast corner has collapsed into the plain below) are fronted by a line of pillars behind which is a shallow corridor for people to gather out of the sun and rain; it must have supported a similarly shallow balcony above.

In the southern part of the west wing is a complex suite of small rooms that may have functioned as storage space, as administrative offices, or as private rooms for the inhabitants. In the center of this suite is a lustral basin (Pl. 6.4): a small room just inside of which is a narrow platform that overlooks a sunken basin. This basin is reached by a short flight of stairs that descends in a few steps, turns a corner, and descends again to the floor. What these basins were used for, we do not really know. They have no drains or outlets of any sort, so they cannot have been baths or basins in the modern sense. They are usually lined with gypsum slabs, but one at Chania is painted to look like stone and another at Zakros has a painted band of **horns of consecration** (a symbol shaped like abstract bull horns). This decoration is common, but real horns of consecration in stone also exist, usually lining the tops of buildings – perhaps they referred to the double horn shape of Mt. Ida or perhaps they derived from the Egyptian hieroglyph for the horizon. Lustral basins are found in both palaces and houses and both in Crete and at the heavily Minoanized site of Akrotiri on Thera (Ch. 8, p. 192), but not on the Greek mainland. The decoration of the Thera example (Ch. 7) suggests that the basin was used by women. Whatever its function, the lustral basin was peculiar to Neopalatial Minoan society, and disappeared with its fall.

In the middle of the north end of the central court at Phaistos an opening in the wall leads to the northern two-story suite of rooms. Here there are two smaller open courtyards, a simple court on the ground floor and a court above ringed by columns. One of the rooms in this suite contains a long bench made of gypsum slabs (Pl. 6.5); such rooms are common elsewhere. Two of the rooms are **polythyra**, with several pier and door partitions instead of continuous walls (Pl. 6.6). Polythyra are also common, but all that remains of any of them is the I- or L-shaped gypsum bases for the door jambs. Here at Phaistos there

are two sets of three doorways that run across the width of each room, one behind the other. Because the gypsum bases are narrow, the door jambs (presumably wooden) could not have been very substantial, and because there is no evidence for real doors, we probably should imagine curtains that could be drawn aside or let hang depending on the weather and heat of the day. At the back of these rooms is another lustral basin and a **light well**, a room whose roof is open to the sky to let light and air down to lower stories. Because here at Phaistos and elsewhere the buildings had at least two stories, we can imagine balconies in the upper stories overlooking the light wells. Most light wells are handsome, lined with gypsum slabs or made of poros ashlar blocks; they have drains and must have been pleasant places to work next to, out of the sun but airy and amply lit (enough for pots of flowers such as the lilies we see in frescoes).⁷

At Nirou Chani is a freestanding house in what was probably a small seaside town on the north coast east of Herakleion (Pl. 6.7). Next to the house is a storage building with three magazines containing pithoi and one room that contains cribs for dried food and fodder for the animals. The main entrance is off a spacious court into a porch with two columns that leads directly into a polythyron with a single set of four doorways. Off the polythyron, one passage leads into more private quarters and another runs straight back to a small bench room looking onto a light well. Two more corridors, one lit by a window from the light well, lead to storage rooms. Behind the bench room a square storage room without windows contained a mass of plaster “offering tables” (short, small tables on three short legs, presumably for placing small items such as cups of olives). The private quarters consist of a suite of four rooms: a small light well with slate paving and a window to the outside, another bench room next to the light well, a storage area, and a bath with a drain and a waterproof floor of pebbles set in a plaster mortar. At the end of a corridor from the private quarters is another closet, containing large bronze double axes, and a staircase up to the second story. We can imagine that the plan of the second story followed the plan of the first closely, but with a balcony above the entrance porch. Because the private suite on the ground floor juts out from the otherwise square plan, another balcony above the bench room would have looked onto the light well. The walls of the house are built of several different materials: poros ashlar around the light wells, rough-hewn limestone stones for the exterior wall facing the large court, and baked mud brick in timber frames for the upper story walls.

Masonry consisting of rough-hewn stones is common; where the stones are large, over a meter in diameter, they look like later Mycenaean Cyclopean walls (Ch. 11, p. 262), and many of them serve the same purpose, to support terraces on which sit other structures. Several of the houses at Zakros are built into the slope of the hills, with massive megalithic terrace walls to support them.

MINOAN STATES

Crete is divided by three massive mountain ranges into five major regions (Ch. 4, pp. 77–8). We would expect each of these zones to have had at least one major Minoan center (a palace) and several towns, each in turn the major center of its own subregion. In addition, because the isthmus in the center of the island provides a major transportation route north–south linking the Aegean with the Libyan Sea, we expect Knossos on the north side and Phaistos on the south to have emerged as important centers for the entire island. By LM IA, however, Phaistos seems to have diminished in importance: no administrative documents come from Late Minoan contexts there, and there is little evidence for occupation in LM IB.⁸ The administration of the Mesara must have been left to Aya Triada just to the west of Phaistos, and the central administration of the island (in whatever form that took) to Knossos.

The secondary regions of Crete are easy to discern; each primary region contains several small valleys ringed by low hills, each about the size of a United States county, and in each of these we would expect a secondary urban center. The smaller villages, farms, and rural complexes would then have constituted tertiary centers that lay close to the borders between primary regions. Thus Minoans traveling from Knossos to Phaistos might have started out from the primary center of Knossos and headed south to a secondary center such as Archanes at the foot of Mt. Iuktas, bypassing the tertiary farm complex at Vathyptero. From here they would have descended into another major region, the bowl of the Lykastos valley, first bypassing some of its farms and villages before entering the secondary center of Lykastos itself. Continuing the journey into the Mesara, they would first have passed through the towns and farms of Lykastos and then, entering the Mesara, its farms and secondary villages and towns, finally reaching the primary center of Phaistos or Aya Triada.

Of course the picture is not as simple as theory and generalities make it seem. We know most, archaeologically, about central and east

Crete; we have not yet found a palace west of Knossos. And east of Malia the major centers, Gournia and Petras on the north coast and Pyrgos on the south, are all rather small – was Malia a primary center that had control over these eastern settlements? Zakros seems isolated and the surveys in the surrounding region have not come across any settlement larger than a farm – was there no secondary town in the southeast region? In fact, from what we actually know, the three-center model for early states works only for central Crete, where, for instance, we can see the farm at Sklavokampos up on the slopes of Mt. Ida as dependent on the town at Tylissos in the plain below, which was itself dependent on Knossos. It is possible that the state of Malia worked slightly differently. Because the Lasithi plateau directly south is too high (ca. 3,000 ft above sea level) to be agriculturally productive year-round, its summer inhabitants probably came down into the coastal plains in winter. Thus, although the Lasithi plain does not appear to be geographically part of the northern coastal strip dominated by Malia, it probably was administered by Malia because of the seasonal movements of its population – and sealstones produced by the Neopalatial workshop in Malia's Quarter Mu (below, p. 159; Ch. 5, p. 124) have been found in abundance in the Lasithi plain.

Several archaeological aspects seem to confirm this model for an early state: a three-tier hierarchy of sites per major region, including Knossos as both the primary center for the central northern plain and the island's supraregional center. The excavated Minoan farms, towns, and smaller palaces seem to recreate the micro-regions that the Venetians and Turks recognized in early modern times; and, to support Knossos as a supraregional island center, prestige and display objects that can only have been produced at Knossos were disseminated across the island. It is important to keep in mind that these Knossian objects may have been produced for ceremonial purposes, because they often take ceremonial form (such as the gold finger rings with religious scenes and impractical animal-headed pouring vessels and funnels known as *thyra* [ceremonial vessels]) and depict ritual scenes (bull-leaping, men at peak sanctuaries, and elaborately dressed women; below, p. 158; 7, p. 166).

Some Neopalatial administrative documents (Ch. 7, pp. 175–7) also mention places that we can identify with more or less certainty. *PA-I-TO* (Phaistos) appears on at least two tablets from Aya Triada; *Sybria* (*SU-KI-RI-TA*) in the Amari valley west of Mt. Ida appears on one of the few Phaistos tablets, and its adjectival form appears on a tablet from Aya Triada. *TU-RU-SA* on a libation table from the mountain

peak sanctuary of Kopinas near the south central coast and *A-TU-RI-SI-TI* inscribed on a tall vase found at Knossos both probably refer to the agricultural town of Tyllisos west of Knossos. The place name *SE-TO-I-A* occurs on an inscribed libation table from Prasa near Knossos and on some twenty Mycenaean documents from Knossos – perhaps this was the Minoan name for the peak sanctuary on Mt. Iuktas. Finally, *KU-NI-SU* appears four times on three tablets from Ayia Triada; it was once thought to reflect a Semitic word for wheat,⁹ but the way it is used on the tablets makes it certainly a place-name, and it is tempting to see in it “Knossos.”¹⁰

The major question concerns the nature of Knossos’s superior status in the administration of the island. Did it actually conduct the affairs of the other palaces, appointing, say, the head administrators there and receiving their taxes? Or were the other palaces more or less autonomous, all working within a shared cultural system that assumed harmony? We have no detailed answers for these questions, but the huge size of Knossos (the palace is almost twice as big as Phaistos), its continuity (no LM IB destruction within the palace), and the stylistic quality of prestige and display goods that emanated from Knossos across the island all point to its cultural supremacy, especially in religious and social matters. It would make little sense if this cultural and religious supremacy did not also entail economic and political strengths.

POTTERY

Neopalatial pottery provides important information about the containers used in all aspects of daily life and even after death, as well as giving us economic information about inter-site and international trade and contacts. Because it is almost indestructible, even fragmentary pottery forms the basis for creating a chronology; in the absence of absolute dating criteria (Ch. 1, pp. 3–7). This said, pottery is not a dominant craft in artistic terms, but tends to follow developments in other media. In contrast to later Greek pottery, Neopalatial artisans seldom represented the human figure on their wares; instead, such experimentation was confined to wall painting and engraved gemstones used to impress administrative clay sealings.

Following the light-on-dark polychrome style and exuberant Kamares ware designs that characterized the Protopalatial period (Ch. 5, pp. 121–3; Fig. 9.2; Pl. 8.9), the shift to a dark-on-light style for the Neopalatial period seems startling. The transitional pottery of

MM III sometimes included both styles, so we can see how the work of the pot painters was evolving in the creation of finely produced and fired wares in an increasing range and variety of shapes. One of the distinctive transitional styles was the so-called tortoise-shell ripple, which disappeared by the end of LM IA. The plant style, which continued longer, made use of motifs from the world of nature, especially reeds, grasses, and flowers, which could be painted fairly quickly.¹¹

Special Palatial Tradition pottery is a relatively small class of pottery produced by the palaces, but it includes unusual shapes and elaborate decoration; these are the vases often reproduced in books, but they represent rare and extraordinary pieces, not pieces for daily use. Some of these have been found at other sites in the eastern Mediterranean, and their style was imitated and adapted elsewhere in the Greek mainland and the Aegean islands, particularly in locations with strong contacts with Crete. The floral style continued the traditions of the plant style that preceded it, but the marine style of LM IB introduced motifs connected with the sea: octopuses, **argonauts** (marine mollusks with spiral shells), and dolphins, and seaweed, coral, and abstract patterns, some of which suggest ripples of water.¹² These motifs are often highly detailed, and appear to move as if floating across the surface of the vessel. (Some subjects such as the octopus continued on pottery to the end of the Bronze Age, but they gradually became stiffer and less naturalistic.)¹³ An exceptionally fine marine style ewer in the Herakleion Museum combines painted marine themes with terracotta shells in relief (Pl. 6.8). Coexisting with these were an abstract/geometric style, with elements more formally organized into registers across the surface of the pot, including garlands of flowers or chains of beads, and the Alternating style, with individual motifs repeated around the surface of the vase: figure-eight shields and stylized elements of landscape, or double axes alternating with clumps of flowers or individual blossoms of individual flowers.

Many of the special palatial tradition motifs existed earlier in wall painting; the potters seemed to borrow freely from the other medium, and to be following developments that took place there. One basket-shaped vase with double axes, for example, imitates the shape of a wickerwork container (Ch. 5, p. 129). In addition, the find spots of some of these special pieces have suggested that they were intended mainly for ritual use, to be carried in processions or for pouring liquid offerings.¹⁴

Although we tend to focus primarily on painted pottery, two unpainted shapes deserve mention. The small conical cup was

manufactured in vast numbers and is found at most Cretan sites – this was the Dixie cup of the Bronze Age. Made to a standard size (about 4 oz.), it served as the common drinking cup, but was adaptable to other uses: to hold small amounts of food or religious offerings, filled with oil and given a wick to serve as a lamp, and used as a handy container for odds and ends. By contrast, storage pithoi of coarse clay could be very large and heavy – in some cases, as tall as a person. Many of these were probably made on site and fired there, because of their size and weight. Occasionally they are painted with trickle decoration, or their surfaces have clay additions in the shape of medallions or strands of clay resembling the ropes that might have been tied around the pithos in order to move it or secure it in place. These pots could be used to store large quantities of dry goods (grains, legumes, textiles) or liquids such as oil, water, or wine. Similarly plain are some other specialized types of pottery containers, such as the vats for pressing wine or olives for olive oil.

Scientific analysis has revealed that in general, Minoan pottery shapes and motifs were imitated, but that the vases themselves did not travel abroad. Marine style vases found outside Crete, for example, were often locally produced, not imports.

OTHER CRAFTS AND FOREIGN INFLUENCES

The Neopalatial period marks a unique high point in Aegean craft production: it often surpassed the achievements that came before it, and after it many crafts began to decline until the very end of the Bronze Age. During no other period in Aegean prehistory were so many materials and techniques simultaneously in use, or at such a high level of skill. Nevertheless, the practitioners of these crafts are anonymous, though individual workshops have been identified at a number of sites. The modern tendency to identify various types of workers as artists was probably meaningless in antiquity: a craftsman or craftswoman was simply a person who had mastered certain skills.

Virtually all Neopalatial arts and crafts on Crete originated in the Protopalatial period and continue to evolve, a good indication that the change from Proto- to Neopalatial did not involve a major cultural break despite the rise to a new level of technical competence (Ch. 5, pp. 154–5). Pottery has already been mentioned, but terracotta was also used for architectural models of houses and shrines, some of which include human figures. Clay figures of women, men, animals, and even

body parts were deposited at peak sanctuaries, apparently as votive dedications.

No ancient civilization could exist without metals and the technologies for working them. Bronze, an alloy of approximately 90% copper (from Cyprus) and 10% tin (origin unknown; Ch. 9, pp. 215–16), was used for tools, weapons, and vessels of many shapes. Gold and silver could be used in jewelry and for objects such as double axes, which therefore probably had a cultic, not a practical function. Sometimes objects employed several metals, particularly specialized containers and decorated weapons.

Vessels of sheet bronze have been found in MM II contexts at Malia (Ch. 5, p. 125), but during the Neopalatial era such vessels expanded in variety and size: tripod cauldrons (some of immense size), shallow bowls, and ewers for containing and pouring liquids. Many of these were utilitarian in nature, and could be used for heating water and preparing food, but some vessels have decorated surfaces and rims, and in frescoes they are usually carried in procession by men. Some metal vessels, like their clay counterparts, were occasionally produced in sets, which could be stored in palaces and villas, and even deposited in tombs as part of the funerary equipment for distinguished individuals.

Minoan Type A swords have a grip that is riveted to the blade; the design is therefore not suitable for slashing but rather is good for thrusting and stabbing. These swords were the best produced in the Aegean, and ancestral to those that developed later.¹⁵ Although some of these Type A swords were used on Crete, many were deposited in the shaft graves at Mycenae (Ch. 11, pp. 260–61). It would be interesting to know more about how the mainland élites acquired them; suggestions include spoils of war taken from vanquished opponents; armaments for retainers, or acquisitions made by mainland visitors to Crete.¹⁶ Armorers were responsible for two kinds of shields, the “tower” and the “figure-eight,” both made of bull’s hide stretched over a supporting wooden or wicker framework: these are represented in art, though no actual examples survive.¹⁷

A score of bronze daggers survive that were inlaid in various colors of metal with figures or entire scenes in the *niello* technique. This craft of applying silver and gold figures to bronze daggers with an adhesive of copper, silver, and lead sulfides was probably borrowed from Syria and apparently mastered on Crete, though almost all the surviving examples have been found in mainland tombs (Ch. 11, pp. 259–61; Pl. 11.1). The most famous of these shows a line of warriors with shields fighting lions on one side, and lions attacking deer on the

other, forming a visual narrative that resembles the combat similes in Homer half a millennium later.¹⁸

Vessels of precious metal could be “raised” by hammering thin sheets of gold or silver, metals that are quite malleable. Some of these shapes are enlivened by patterns (occasionally matched in pottery) or are even decorated with figural scenes in the repoussé technique. A pair of gold cups with scenes of bull-capture and bull-leaping from Vaphio, as well as the silver “Siege Rhyton” from Mycenae, were found on the mainland, but were probably produced by Cretan artists (Ch. 11, pp. 260–61). Because Crete is poor in these metals, the raw materials had to be imported: silver from Laurion near Athens (Ch. 8, pp. 200–201), and gold perhaps from central Europe but more likely from Egypt (Ch. 9, pp. 213, 216).¹⁹

Because of the continuous building and rebuilding at many sites, there must have been considerable demand for architectural craftsmen to supervise the quarrying, transport, and finishing of blocks of stone. These included large ashlar blocks of creamy poros limestone, various colored limestones (red, blue, and green were favorites), and gypsum at a few sites such as Knossos and Phaistos. Gypsum flagstones for pavements could be cut or trimmed to shape and grouted with plain or painted plaster; more precisely cut pieces were used for thresholds, column bases, stair-steps, benches, and wall veneer. The obvious Minoan love of architectural polychromy was enhanced by the painting of some plastered stone walls with panels or friezes in the fresco technique (painting on wet plaster) or imitation stone dados with painted patterns that suggest multicolored marble. In most cases, tools seem to have been simple: saws, chisels, drills, and abrasives. Traces of lightly incised guidelines on blocks suggest the oversight of a trained architect, or work from actual architectural plans.

The decoration of interior walls and ceilings was a specialized craft practiced by fresco painters, many of whom seem to have worked primarily at Knossos.²⁰ The technique depended on a careful preparation of wall surfaces (in several layers), control of the damp lime plaster in sections where colors would be applied in a single, short painting session, and the use of string lines, straight-edges, or preliminary sketches as guidelines for the final composition. Neopalatial painting included both miniature and large scale scenes, with a fairly limited number of subjects: scenes of nature with detailed renderings of plants and animals, the architecture of palaces, peak sanctuaries, and townscapes, bull-leaping, repeating decorative patterns, and processions of women or men – only in a few extraordinary scenes are both sexes

shown together. The introduction of human subjects was an innovation of the Neopalatial period, as was fresco painting itself, though it had long been known in other cultures like that of Egypt. Another new feature was relief frescoes, where human and animal figures are built up in plaster against a flat background and then painted. This technique may reflect developments in other crafts such as relief carving of stone vases and *inraglio* for sealstones, where the design is cut into the surface of the seal, but appears in relief when the stone is pressed into clay or wax.

In the paintings, there is a constant tension between naturalism (for example, in depictions of plants and animals) and established conventions: white skin for women, red skin for men; the use of red, blue, or yellow backgrounds, often arranged in undulating bands; and combinations of horizontal and aerial perspective. Most paintings of this period have survived only in scraps, but the recently revealed frescoes from Akrotiri on Thera – many of which are painted in a Minoan style – are helping to fill the gaps in our evidence.²¹

A surprise in recent years is the discovery of scraps of painted plaster at the site of Tell el-Dab’a (the ancient Hyksos capital of Avaris) in the northeast delta of Egypt.²² Among the surviving pieces are human figures, naturalistic landscape elements, and scenes of bull-leaping. Because these scenes do not copy Minoan frescoes in exact detail, they may imply simple influence from Crete; such wall-paintings could have been practiced by itinerant artists, including those from outside the Aegean. Though the precise date of Dab’a within the Neopalatial period is still controversial (sometime within the sixteenth century BCE, however),²³ the spread of Minoan motifs abroad is confirmed by the iconography and style of paintings at other sites: Mileros on the Anatolian coast, Alalakh in Syria, and Tel Kabri in Israel.²⁴

A series of tomb paintings at Egyptian Thebes, of the early Eighteenth Dynasty, show processions of male Aegean natives (“Keftiu”) bearing gifts to Pharaoh (Ch. 9, p. 219).²⁵ Some of their offerings, including a variety of metal vessels, are so close to Aegean shapes that direct contact between the cultures in this instance seems virtually certain. In addition, the men wear Aegean costume and footwear, which differ from those in Egypt, and they have long hair like some of the men represented in Neopalatial art on Crete. But the Keftiu also appear with Syrian tributaries, suggesting a complex system of multicultural exchanges among the populations of the eastern Mediterranean.

Stone vase manufacture, already a venerable tradition on Crete (Ch. 4, p. 93), expanded its repertory with a range of new and specialized

shapes: large drinking cups or chalices, and cone-shaped or animal-headed (lionsesses and bulls) rhyta (below). Colored stone was used for small mace heads, which were probably mounted on wooden shafts as emblems of power or authority. Stone offering tables and shallow ladles, some inscribed, were dedicated at peak sanctuaries, sometimes as miniature votive offerings. A number of stone vessels found on Crete are likely to be imports from Egypt, occasionally modified when they reached the Aegean.²⁶

A special class of stone vessels in black steatite or green chlorite, some with traces of gilding, were carved with scenes in low relief that mirror the themes in palatial frescoes and on seals: male combats, bull-leaping, the architecture of palaces and peak sanctuaries, and marine motifs – but no women.²⁷ Most of these relief vases take the shape of rhyta. The well-known “Boxer Rhyton,” a conical rhyton from Aya Triada, depicts four horizontal zones with boxers and bull-leapers; fragments of other conical rhyta come from Knossos with scenes of men apparently at peak sanctuaries. Another rhyton, in the shape of an ostrich egg, also comes from Aya Triada; it carries a frieze of male agricultural workers marching and singing (Ch. 7, pp. 178–9, 181). Because of shared iconography and techniques, stone carvers and seal engravers must have worked closely together during this period. One puzzle is how these stone relief vessels functioned; most do not have pouring spouts, but they do have small holes either in the mouths of the animal-headed rhyta or in the bottoms of the funnel rhyta. They are too cumbersome to have been used to refill drinks but they could have been used as an exotic way to add liquid flavorings to drinks. At Zakros there are so many of these stone funnels, and in pairs made out of the same stone, that we think they were not used for some exclusive religious ritual such as pouring libations, but rather in banquets. Few of these relief stone vessels have been found intact; most are represented by a single fragment. Pieces of the “Sanctuary Rhyton” from Zakros (Ch. 7, pp. 167, 180; Pl. 7.1) were found scattered throughout the west wing of the palace. Such fragmentation may have been the result of deliberate destruction for ritual purposes, or vandalization in the upheavals at the end of the Neopalatial period. Large-scale relief work in stone is notably absent from the Aegean, however, except for the well-known Lion Gate Relief at Mycenae, whose sculptural technique and iconography follow Minoan practices (Ch. 11, p. 269).

Some stones for architectural relief, vessels, seals, and jewelry were imported from outside Crete and attest to extensive trade networks or the diplomatic exchanges that characterized political diplomacy in

Egypt and the Near East during the second millennium BCE (Ch. 14, p. 362). From the Greek mainland these include red and green marble from the southern Peloponnese, green, black, and white-speckled *lapis lazedaemonius* from Sparta, and obsidian from Yiali, an island off the southwest coast of Anatolia. Blue lapis lazuli came from a single known source in Afghanistan and amethyst from Egypt, whereas black hematite, blood-red cornelian, and rock crystal may have derived from several different sources, including Mesopotamia.

Seals of various hard and soft stones were produced for administrative purposes and could also be worn as jewelry on necklaces and bracelets. The Pre- and Protopalatial seals are of soft stones and dentines (bone and imported ivory, both hippopotamus and elephant); they come in a wide variety of shapes including monkeys and recumbent animals, and the motifs generally consist of abstract patterns, with occasional lions and other animals. A Protopalatial workshop located in Malia’s Quarter Mu produced steatite prisms, many with all three faces engraved and some carrying Hieroglyphic inscriptions (Ch. 5, p. 124; Fig. 5.1).²⁸ Just before the end of the Protopalatial period, the Malia Workshop began to carve harder stones, and from this period on hard stones such as brown and black banded agate, red cornelian, and blue amethyst were the preferred materials for seals. Beginning with the Neopalatial period, seal shapes were standardized: most seals are quite small (diameter ca. 1.5–2 cm) and are usually biconvex in section with faces that are circular (lenticoids), almond-shaped (amygdaloids), or rectangular (cushions). Cylinder seals, common in the Near East, are rare.

Finger rings of gold (Pl. 6.1), silver, bronze, or a combination of metals were employed by top administrators, some of whom may have held religious office as well. The hoops are generally too small to permit wearing on the fingers. Where seals and finger rings are found in intact tombs, they usually lie next to the left wrist as if worn on a bracelet, or on the chest as if suspended from a necklace. Neopalatial seals hardly ever show the abstract patterns that were common earlier; instead, they feature animal studies (recumbent bulls, cows nursing their calves, and the Cretan wild goat, the *agrimni*) and the human figure in action. The gold finger rings carry special scenes such as bull-leaping (Ch. 7, pp. 180–81) and religious ceremonies; a religious scene repeated on several finger rings features a nude youth hugging a large boulder, a dancing woman in the center, and a youth or young woman tugging at a tree growing from rocks or in an enclosure (Pl. 6.1; Ch. 11, p. 279). The precise meaning of this scene is unknown, but such activities may have been intended to invoke a god’s epiphany.²⁹

Several other materials and techniques came to Crete from the eastern Mediterranean: elephant and hippopotamus ivory, glass, and faience, an opaque quartz-glazed compound that could be colored and molded into various shapes before firing (Ch. 9, pp. 216, 219). Faience was used for the production of small vessels, inlays, plaques, and jewelry, and for female figurines such as the well-known large and small "Snake Handlers" found in the Knossos palace. Only two of these are usually illustrated, but the skirts of three survive, along with other body parts. Ivory was suitable for carved plaques, cosmetic vessels, mirror handles, small figurines, or larger group compositions such as the figures of bull-leapers from the Knossos palace.³⁰ A tall male youth (height ca. 60 cm) from Palakastro (Pls. 6.9, 6.10) has recently been restored from scattered sections of hippopotamus ivory for the body, wood for nipples, gold foil for his costume, rock crystal for the eyes, and carved dark steatite for his hair.³¹ This tendency to combine a variety of materials for color contrast is a hallmark of the period.

There is abundant evidence for architectural woodworking in the form of horizontal and vertical beams, cross-ties in rubble walls, roofing systems, staircases, and cupboards. (Crete was probably better forested in antiquity than it is today.) Sealstones and wall paintings also provide indirect evidence for the construction of wooden ships. By contrast, Neopalatial furniture manufacture has remained an elusive craft. The stone throne in the Knossos palace has a contoured seat and curved supports that suggest skilled joinery, confirmed by the plaster cast of a disintegrated wooden table from Akrotiri on Thera. The Poros-Herakleion tombs, however, have provided new evidence on Crete itself for beds, litter, and biers; some were designed for burials, but others may have been used during life. A few have plastered surfaces and were painted.

One craft that is only now receiving proper attention is the production of high-quality textiles for international export. Though textiles have not usually survived in the archaeological record, we know them through their depictions, primarily in fresco.³² The spindle whorls and loom weights discovered at many sites are important evidence of cloth manufacture (Ch. 11, pp. 276–7). Before modern mechanization, the labor involved in producing cloth from start to finish consumed vast amounts of the available time of many individuals, apparently mostly women, from childhood through old age. The Minoans wove wool and linen cloth on the warp-weighted loom and dyed raw wool, spun thread, and cloth using a variety of natural agents, including murex shells for the deep red/purple that was famous in all periods of antiquity.³³

A strong yellow color was produced from the stigmas of saffron crocus flowers, shown being collected by women in several wall paintings – and by leashed monkeys.³⁴ Because of its use in food and medicine, as well as cloth production, the harvesting of crocus may have been exclusively a women's activity. Red, blue, and white were the main colors used for dyeing textiles, and throughout the Neopalatial period, elite women in art (and so presumably in life) wear more elaborate costumes than men as a sign of their importance. Specialized patterns could also be produced through techniques such as tapestry weaving or embroidery.

A discussion of cloth necessarily brings us to issues of costume. Though no actual garments have survived, it is possible to reconstruct the cut and decoration of many costumes from depictions in the frescoes.³⁵ Because wall paintings often show special scenes, it is difficult to determine what ordinary people wore on a day-to-day basis. Men generally wore a breechcloth secured at the waist as an undergarment or simple clothing for strenuous activities, to which a stiffened codpiece (leather or metal?) could be added to protect the genitalia in combat or bull-leaping. Over this was worn a kilt and, depending on the weather, a variety of cloaks or mantles, with pointed leather sandals laced up the ankles, boots, and sometimes leggings. Women wore a short-sleeved robe (like the modern bathrobe) open at the front to reveal the breasts, at least on special occasions. As a rule this robe was ankle-length for adult women and calf-length for prepubescent girls, but both might wear a wrap-around apron, often flounced, fringed, or heavily patterned, that was secured at the waist with ties. Often women wore a thick belt or girdle around the waist, a cloak or mantle, and a kerchief or hat over the hair. Perhaps surprisingly, these formally dressed women are always depicted barefoot, perhaps to convey the impression that elite women did not work in the fields.

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7: MINOAN CULTURE: RELIGION,

BURIAL CUSTOMS, AND

ADMINISTRATION

John G. Younger and Paul Rehak



RELIGION AND CULT PRACTICE

In the modern world, Western societies tend to separate religion and ritual from other aspects of society in a way that ancient or "primitive" societies did not. In ancient cultures religion was an integral part of daily life, including the treatment of the deceased after death. For a heavily agrarian society, cult practice centered on daily and seasonal activities and on human involvement with a perceived supernatural world. Although it is difficult to reconstruct belief systems without documentary evidence (below, pp. 173–82), the archaeological record preserves much evidence for ritual equipment and activities. What makes Minoan society interesting, as well as difficult for us to understand, is the apparent overlap between religion, society, and politics. Some of these issues have been addressed in detail,¹ but no consensus has emerged among scholars – an impossibility, perhaps, in any discussion of religion!

We assume that the foundations of Neopalatial religion were laid in the Protopalatial period, and probably much earlier, in the form of cults at caves (some at quite remote locations), at sanctuaries on mountain peaks throughout the island where offerings were made of terracotta human and animal figures, and at communal tombs, often deliberately situated to provide easy access from the homes of the living (Ch. 4, p. 93). At the time of the first palaces, there is evidence for the existence of small shrines outside the palaces, and for the adoption of certain symbols such as the **horns of consecration** (shaped like abstract bull horns; Ch. 6, p. 148) and short stone blocks ("altars") with incurred

sides. The palaces, moreover, may have promoted some official or public cults alongside personal or private belief systems for individuals (Ch. 5, p. 114). What is noteworthy, however, is that Crete lacks evidence for the large formal temples that are such a common feature of contemporary cultures such as those of Egypt and Mesopotamia, and the evidence for depictions of divinities in the form of cult statues is ambiguous at best.

With society's increasing focus on the major palaces and administrative centers at the beginning of the Neopalatial period, control of public religion and cult practice may have become increasingly dominated by the palatial elite, especially at Knossos. Although the number of peak sanctuaries on the island actually declined overall, activities at a few select sanctuaries (such as Mt. Iuktas near Knossos) became more intense, and the offerings richer and more varied. The connection between palace and peak should be emphasized because it is a feature that clearly distinguishes Crete from other ancient societies. One regular form of cult activity, perhaps with social overtones, was the periodic visit or pilgrimage to these peak sanctuaries, where food and drink was consumed and offerings were made at bonfires.

Kato Syme, high on the slopes of Mt. Dikte overlooking the south coast of Crete, was an important open-air sanctuary apparently unconnected with any major settlement, and perhaps inaccessible during the winter. Nevertheless, Kato Syme shows evidence of both Proto- and Neopalatial cult activity, with clear indications of cult continuity into the historical period, when the sanctuary was sacred to Hermes and Aphrodite. Below an imposing waterfall, small ritual structures were laid out on a steep slope around areas that included large bonfires and places where votive offerings such as stone offering tables were deposited.

Most ritual equipment was portable and was stored in small rooms or closets when not in use (as at Nirou Chani; Ch. 6, p. 149): metal double axes (some large and clearly meant for public display, others small and made of gold or silver appropriate for dedications), tripod offering tables, and stone and pottery vessels (both are often found in pairs). A special class of stone ritual vessels includes bull's head *thyta* (ceremonial vessels) for holding and pouring liquid offerings and carved relief *thyta* with scenes of men and male activities (Ch. 6, p. 158). Ivory was used mainly for statuettes of men, such as the elaborate youth from Palakastro (Ch. 6, p. 160; Pls. 6.9, 6.10); the ivory "goddesses" in modern museums appear to be fakes.² Faience was used instead for statuettes of women and for plaques of female costumes clearly meant

for suspension. Bronze could be used for votive figures of both sexes, alongside the traditional terracotta examples. The portability of all these objects suggests that there were few fixed or permanent locations for religious ceremonies — activities could be staged in different locations as needed. The Zakros palace, for instance, had storerooms with built-in clay chests that contained stone chalices, maces, and faience shells, all of which may actually have been used in the adjoining "banqueting hall" or the central court nearby (Fig. 6.5).

Engraved sealstones and metal finger rings (or their impressions in clay) provide additional evidence of ritual activities and the locations where they occurred. Women and men tend to appear in sexually segregated groups, except on a few sealstones and in a few of the Knossos frescoes where large numbers of people are gathered (the "Grandstand" and the "Sacred Grove").³ The west and central courts of palaces may have served as the gathering points for these large groups. Although there were few, if any, built temples in the Classical Greek sense, small tripartite shrines are depicted repeatedly, often associated with small trees or large plants — men may pull on the branches, men embrace boulders, and men and women can appear in dances that have been characterized as ecstatic. The tree-pulling, boulder-embracing, and dancing may have been designed to provoke the divine epiphany of a goddess or god (Chs. 6, p. 159; 11, p. 279; Pl. 6.1).⁴

Some of these shrines depicted in art are so flimsy they may have been only façades set up at certain times and then dismantled. On a carved ivory fragment from Ayia Triada, two young girls garland flimsy pavilions set up on bases and crowned by horns of consecration, perhaps temporary constructions. The Zakros Sanctuary Rhyton (Pl. 7.1) depicts a peak sanctuary consisting of a tripartite façade with horns of consecration and "nasts" set in the background like a backdrop for the courtyard in front (below, p. 180). This contains two altars: one a long, rectangular table and the other a Minoan incurved base — examples of both have been found at Archanes.⁵

Few images of goddesses or gods can be recognized beyond doubt. Because so many representations of important women survive, some scholars have hypothesized the existence of a supreme Minoan goddess, or of a whole series of goddesses. A suggested compromise proposes the existence of one main goddess with various aspects.⁶ That these are speculations, rather than fact, should remind us again how nebulous our reconstruction of Minoan religion still remains.

Most convincing as the depiction of a goddess is the appearance in some scenes of a large woman, often placed centrally, seated on a rocky outcrop, built platform, throne, or abbreviated palatial architecture, and attended by extraordinary or supernatural animals such as lions and griffins (Pl. 7.2). Other depictions are more controversial. One such "mistress of animals" who could represent a divinity wears unusual headgear with wide, curving horns, surmounted by a double axe (the so-called **snake frame** headdress) whose significance is disputed. Other women may hold a staff (scepter or spear?) stiffly out in front of them in what is called the "Commanding Gesture," a conventional pose that could denote either divine or temporal authority. The figure of a man in similar pose on a clay **sealing** (a lump of clay impressed by a seal) from Chania (Pl. 7.3) has likewise been interpreted as a god or as a ruler; he stands atop a cityscape that includes a cliff, cave, and waves, perhaps depicting the ancient harbor of Chania itself.⁷

The presence of unusual animals is sometimes interpreted as signifying the divinity of the anthropomorphic figures that they accompany. These animals include lions and other felines, griffins (with eagle heads and wings and leonine bodies; Figs. 11.5c, 11.5e), Cretan **agrimia** (wild goats), monkeys, and various birds. Lions, griffins, and monkeys are clearly exotic creatures, associated with rulers or divinities in other ancient cultures of the eastern Mediterranean; their presence on Crete (Pl. 7.2) suggests a borrowing on at least the iconographic level. The presence of agrimia in a variety of Minoan scenes such as the Zakros Sanctuary Rhyton (Pl. 7.1) likewise suggests that they signaled something special.

Another clear instance of iconographic transfer from the supernatural realm is the figure of Taweret, a hippopotamus goddess associated with women and childbirth in Egypt.⁸ She appeared on Crete in Protopalatial times, and continued in later periods, but we cannot be sure if the Minoans kept her original religious meaning when they borrowed and changed her image. On Crete, these creatures often hold libation jugs for pouring offerings, but they also have lion heads and perform a range of other activities. Because the image continued to evolve in the Aegean, this being is often called the "Minoan **genius**," and the Mycenaeans adopted her as well (Ch. 11, pp. 275-6, 279; Fig. 11.5d).

During the Neopalatial period, Minoan religious iconography and even specific cult practices such as peak sanctuaries and associated equipment spread off Crete to some of the "Minoanized" sites in the Cyclades

such as Ayios Yioryios on Kythera, Akrotiri on Thera, Phylakopi on Melos, and Ayia Irini on Keos (Ch. 8, pp. 189-97). Possibly this spread represents a form of religious colonialism with political overtones, similar to the role that the Catholic church played in the European colonization of the New World, the Far East, and much of the rest of the globe from the fifteenth century CE onward.

Most experts accept that the Ayios Yioryios peak sanctuary on Kythera, with its bronze and terracotta figurines and stone vessels (including one with an inscription), functioned like its religious counterparts on Crete. Similarly, Cretan style frescoes have been found on Melos, on Keos, and especially on Thera. Xeste 3 at Akrotiri on Thera (Ch. 8, pp. 192-3) had an intriguing fresco depicting two young women flanking a seated "Wounded Woman" with a bleeding foot, above a **lustral basin** (small sunken room of unknown function; Ch. 6, p. 148) on the ground floor; an adjacent wall shows a shrine façade and tree, motifs familiar from Cretan religious iconography. On the second floor of Xeste 3 another complicated scene (Pl. 7.2; Fig. 7.1) depicts a woman in Minoan costume, seated on a stepped architectural platform and attended by a blue monkey, a leashed griffin, and four young girls – the woman flanked by her exotic animals can be accepted as a (or the) Minoan goddess. A later sealstone, now in the Benaki Museum in Athens, shows a man standing on horns of consecration between a winged agrimi with a lion's body and a Minoan genius – like the Akrotiri goddess, he too should be divine.⁹ As we travel farther afield, the evidence for Minoan religion becomes more tenuous and harder to interpret: the falence "sacral knots" and lion and bull's head rhyta in the Mycenae shaft graves could represent exotica rather than an adoption of Cretan belief systems (Ch. 11, pp. 259-61).

A special class of objects, stone offering tables, were dedicated at peak sanctuaries. Many of them carry a formulaic inscription in the script known as Linear A; these inscriptions seem to refer to a single goddess, "JA-SA-SA-RA" (below, pp. 174-7). Another aspect of Minoan religion is debated as well: the possible role of animal sacrifice, which is such a prominent feature of Greek religion in historical times.¹⁰ Because of the repeated depiction of bulls and bull-leaping at Knossos (frescoes and relief frescoes, stone rhyta and relief vessels, terracotta vessels and figurines, seals, sealings, and finger rings), the capture of and playing with bulls as a prelude to sacrifice has been investigated from a number of viewpoints.¹¹ Because some scenes show bulls trussed on low tables, there seems little doubt that some of them were killed and consumed, in a practice that may have been social, religious, or both.

But in contrast to the historical period, there is little indication that portions of the animal were burnt as offerings to a divinity.¹²

More disturbing are the indications of possible human sacrifice in the Knossos area. A basement room in a LM IB house west of the palace contained cooking pots and the bones of several children that appear to have been defleshed deliberately.¹³ Such defleshing is a practice in later Greek culture, but some have suggested that the children had been cannibalized, perhaps as the result of siege conditions or as an extraordinary sacrifice. At Anemospilia south of Knossos on the route up to Mt. Iuktas, a stone building (way station?) collapsed in an earthquake at the beginning of the Neopalatial period, burying four individuals, one of whom, a young male, was lying on a platform next to a lance blade. The excavator thinks the young male had been sacrificed¹⁴ (he may more likely have been the victim of a hunting accident); without a complete and detailed excavation report it is difficult to interpret the event.

Finally, we should note that Minoan religion might have fluctuated considerably during the Neopalatial era. And it probably contained local elements: hundreds of sealings at Zakros, for instance, were impressed with the faces of three-sided prisms that depict bull-women, lion faces carrying snake frames, winged goat-men, and other strange monsters. At a number of sites, like Palaikastro, objects like stone horns of consecration were discarded or reused as building material during LM IB, perhaps indicating resistance in parts of the island to the tenets of established religion following the destabilizing eruption of the Thera volcano (Ch. 8, p. 189). Other locations, such as the island of Pseira, were given a relief fresco of a goddess and other cult equipment only in LM IB, following the eruption. What can be said with certainty is that the widespread destructions at the end of LM IB marked a significant change in Minoan religious practices.

BURIAL CUSTOMS

Despite the impressive remains of Neopalatial habitation sites, the accompanying cemeteries have proved elusive, leading some scholars, such as ourselves, to wonder if some Minoans of the New Palace period were buried at sea. Recent excavations, however, are helping to redress this imbalance, though most of the burials uncovered thus far represent the elite members of society, not the common people. The large



FIGURE 7.1. Goddess in upper fresco from Xeste 3, Akrotiri, Thera. Drawing by Paul Rehak.

cemetery at Archanes-Phournoi (Pl. 7.4) extends over much of the long ridge below and to the north of Mt. Iuktas, and includes burials that run continuously from Early Minoan times through the Proto- and Neopalatial periods into the Late Minoan period. A wide variety of practices are represented, however: **tholos** tombs (round domed tombs), burial in built structures, **inhumation** (burial) and the use of terracotta sarcophagi, and the collection of skulls following the decomposition of the body.

Several cave tombs were found at Mavrospelio northeast of the Knossos palace, now augmented by the discovery of half a dozen pit-cave tombs used for successive inhumations (many of them warrior graves and burials with bronzes) excavated at Poros near Herakleion, one of the port towns of the Knossos area.¹⁵ The Odos Poseidonos tomb at Poros consists of an antechamber and two main rooms with built dividing walls. Material from the earlier burials was brushed into a pit to make room for new arrivals, continuing an earlier Minoan practice. Though the tomb was partially robbed in antiquity and the entrance passage used for a dump, skeletal material – especially skulls – survives from a score of individuals. Some of these burials included rich grave goods: sealstones of semiprecious stone and an imported scarab, a gold finger ring and silver earrings, beads of various semiprecious materials, many small cups, an ivory comb, and plaques from a boar's tusk helmet. The complete lack of bronze and precious metal vessels suggests that the looters may have targeted these objects.

The Leophoros Ikarou tomb, located nearby, was similar in form but included an antechamber with a carved pillar along with several rooms. Once again, earlier burials were collected and redeposited in special areas, especially the skulls, which far outnumbered the complete bodies. Significantly, the use of the tomb began in MM IIB and expanded in Neopalatial times to the end of LM IB. In addition to the ubiquitous cups, there were signet rings of gold, silver, and bronze, an imported Canaanite amphora, more sealstones, and a wide range of personal ornaments.

In both tombs, individuals were laid to rest initially on plain or painted wooden biers or beds, sometimes deposited atop a low, built platform or dais. Significantly, this burial practice foreshadows by some seven centuries the later Greek rituals of **prothesis** (mourning the deceased on a bier) and **ekphora** (carrying a bier to a grave site) that we see on Late Geometric vases (Ch. 13, pp. 338–9; Pl. 13.2). The Minoan burials in Neopalatial sarcophagi at Archanes–Phournoi remind us that at least two types of funerary rites coexisted in Crete, but only in the succeeding period (LM II–IIIA) would sarcophagi begin to carry painted decoration that included the human figure.

Finally, two unique and enigmatic funerary structures deserve mention: the so-called Temple Tomb just south of Knossos and the Royal Tomb to the north at Isopata.¹⁶ Both constructions seem to belong to the latter half of the New Palace period. The Temple Tomb was partially built into the side of a hill, with an open courtyard separating

an anteroom from a pair of chambers with a pillar; skeletal material (some of later date) suggests a funerary function for the building. The Royal Tomb, dismantled during World War II, consisted of a **dromos** (entrance passage) leading to a large, vaulted, rectangular chamber where the dead were buried. These different structures illustrate inventive approaches to funerary architecture for elite individuals or families in the Knossos area.

WRITING AND ADMINISTRATION

We first see administration on the Greek mainland in EB II, a sealing administration adapted from that which had already operated in the Near East for a millennium (Ch. 2, pp. 30, 34–5). Basic administration is simple: certain people and regions are expected (i.e., taxed) to produce specific goods; these are collected at an administrative center and redistributed back to the people.

A simple scenario for Minoan Crete would go like this: administrators at the regional center assess several villages to provide the state with a certain number of bushels of olives and jars of wine (both products ready for consumption by February). By the due date one village has contributed its total assessment, but other villages have made only partial payments – we can assume the remainder eventually will be paid. As the commodities enter the palace for storage, the administrators in charge tie string around the handles of the bushels of olives and over cloths that cover the mouths of the wine jars. Over the knots of these tied strings they then press lumps of clay and impress the clay lumps with the engraved seals and finger rings provided by the state; these sealings authenticate the transaction (Fig. 1.3). After the standardization of seal shapes at the beginning of the Neopalatial period, the styles of the engravings began to change in regular succession to correspond with major changes in administration. If olives and wine can be represented by tokens, say olive pits and grape seeds, and if the quantities needed are standardized (each bushel with a specified volume, each jar with a specified quantity of wine), then the entire transaction can be conducted without writing: as each village contributes its olives and wine, the administrators move the representative numbers of pits and seeds from an already established pile (the assessment) to create a new pile representing the commodities brought into the system. When the commodities are redistributed, specific quantities of wine and olives,

for example, going for state-sponsored ceremonies and other quantities to towns and people that provide other commodities to the state, then that amount of seeds and pits is removed from the "income" pile. At the end of the auditing period, the remaining wine and olives are counted in the storerooms and matched against the remaining tokens in the income pile. If the numbers match, then the procedure has been conducted honestly. Something like this system was probably happening at the Early Helladic II sites such as Lerna, where quantities of sealings have been recovered (Ch. 2, pp. 34-5; Pl. 2.1). These sealed string that tied the pegs of baskets and chests, perhaps containing textiles.

So few sealings survive from Early Minoan Crete that it is not yet possible to say whether a sealing system like that on the Greek mainland existed on the island at that time. At the very beginning of the Middle Minoan period, however, several sealings from Knossos testify not only to a sealing system of administration but also to writing (Fig. 1.3; Ch. 5, p. 130). A sealing system without writing can record income and expenditures but it cannot specify names, and the early Knossos sealings were impressed by seals bearing the name "JA-SA-SA-RA" in the script commonly known as Cretan Hieroglyphic (below, pp. 175-7); JA-SA-SA-RA may be the name of a goddess akin to the Hittite "Esha-sara" or the Levantine "Asherah."¹⁷

There were four scripts in preclassical Crete. All were syllabaries with approximately 100 signs, each of which represented either an open vowel, such as *a* or *e*, or a consonant plus vowel, such as *da* or *de* (Ch. 1, pp. 12, 14). The scripts also included "logograms," signs that stand for entire words such as the signs for "wine" and "olives" ($\overline{\text{w}}$ and $\overline{\text{o}}$ in Hieroglyphic and $\overline{\text{w}}$ and $\overline{\text{o}}$ in Linear A and B), and there were signs for pure numbers (base 10 system, like ours), standardized capacities (such as the bushel and wine jar and their subunits) and weights (such as the *talenti*, 29 kg or 64 lbs.), and both common and unusual fractions. A few signs resemble Egyptian hieroglyphic signs, but not, apparently, with the same phonetic values.

Cretan Hieroglyphic is not a religious script (as the term "hieroglyphic" should mean) but a pictographic script, where many of the signs seem more like cartoons of common animals (such as a bull head $\overline{\text{z}}$ for "MU") and things (such as a double ax $\overline{\text{p}}$ for "A"). Because Hieroglyphic writing was often messy, the scribes usually prefixed an initial "X" to the beginning of words and phrases, to let the reader know where to start. Linear A (Pl. 7.5) began developing almost immediately (MM IB or IIA) from Hieroglyphic. Its signs present cursive

and abstract versions of Hieroglyphic signs (hence, "Linear"; cf. Linear A $\overline{\text{r}}$ for "MU" and Hieroglyphic $\overline{\text{z}}$ for "MU"), and the words and phrases are written on ruled documents with clearly marked dots to separate the words. In MM II and III Hieroglyphic and Linear A were apparently written simultaneously at the major sites of Knossos, Malia, and Phaistos.

Although we do not see Linear B until much later, it apparently began developing from Linear A early (Ch. 1, p. 14). Cypro-Minoan, another script derived from Linear A, appeared on Cyprus also early; the first CM document dates to the sixteenth century BCE. There may have been other early scripts in the eastern Mediterranean influenced by Linear A.

Cretan Hieroglyphic was incised onto sealstones (many of which record the name of the presumed goddess "JA-SA-SA-RA"), stone and clay vessels, and clay documents. The last come primarily in three different shapes, each presumed unique to a specific administrative function (Fig. 1.3): sealings over knots of string, "medallions" pierced to hang from a loop of string, and small rectangular bars that present administrative summaries. Linear A is found on different kinds of clay documents: sealings over knots of string, prismatic sealings over tightly wrapped leather "packages" (Pls. 7.3, 7.6; probably written documents on parchment), "roundels" that look like discs and are impressed by seals around the rim, and neat rectangular clay tablets (Pl. 7.5). Linear A inscriptions also appear on a variety of other objects: clay pots and storage vessels, gold hair pins, the insides of cups painted in a spiral (a gold finger ring also has a long inscription incised in a spiral), and many offering tables – but only one seal carries a Linear A inscription. Cretan Hieroglyphic and Linear A may have been written contemporaneously, but perhaps on different kinds of documents for different purposes or even different administrations.¹⁸

A few words appear in both Linear A and Linear B (the Mycenaean writing system, deciphered in 1952 as Greek; Ch. 1, p. 12); we can therefore be certain of the phonetic values for about 15 Linear A syllabograms, though the language written in it has not yet been deciphered.¹⁹ For the other signs that look similar in both Linear A and B, scholars assume a similarity in phonetic values; with caution we may postulate similar phonetic values for signs in Hieroglyphic that look like predecessors to Linear A and B signs. Many Hieroglyphic and Linear A documents, especially the clay bars and tablets, record the same basic administrative transactions described above (pp. 173-4): the logogram for the commodity and a large number (its assessment), names of towns

or people, and their payments or non-payments. Linear A tablets often record subtotals of payments and deficits, each amount preceded by a two-syllable word, "KU-RO" for "payment" and "KI-RO" for "deficit." Hieroglyphic also records similar words preceding similar subtotals, "KU-RO" for payment but "KI-RU" for deficit. Because other words occur in both Linear A and Hieroglyphic (including important place-names and other transaction terms), it is likely that the scribes writing Hieroglyphic and Linear A were writing the same language – that which we call "Minoan."

What the Minoan language was, however, we are not sure. Because the earliest habitation levels in Crete betray a full knowledge of developed Neolithic culture and many of the objects look Anatolian in inspiration, it is presumed that Crete was deliberately colonized by people from southwest Anatolia (Ch. 4, pp. 79, 98–9). If so, the Minoan language may have developed from one of the languages in that region, perhaps Luwian. Other scholars see Semitic influences in Minoan,²⁰ but these depend solely on Semitic loanwords, such as "sesame," a word that appears in both Linear A and B (and English!). Because Hieroglyphic and Linear A documents are mostly accounting lists and because we have very few of these (only about a page and a half of Hieroglyphic when compressed into a single-spaced statement, and only about six or seven pages of Linear A), we therefore see only a few words whose prefixes or suffixes change according to grammatical function. Some words could be verbs, ending in *-SI* (singular?) or in *-TI* (plural?), such as 'U-NA-RU-KA-NA-SI' and 'U-NA-RU-KA-NA-TI' in the Libation Formula below. Other words look as if they could be Indo-European adjectives, ending in *-I-JA* (feminine?) or *-U* (masculine?); and some words look like nouns in an objective case ending in *-ME*, such as "JA-SA-SA-RA-ME" in the Libation Formula below. So far, however, Minoan resembles no single known language.

One of the more intriguing Linear A texts is the so-called "Libation Formula" that occurs on some 30 artifacts, most coming from peak sanctuaries.²¹ The Formula consists of eight words. The first word occurs in many spelling variants, some of which transpose syllables (an invocation?); the fourth through eighth are always the same. The second usually consists of an identifiable place name ("DI-KI-TE" for Mt. Dikte, "I-DA" for Mt. Ida, and "SE-TO-I-JA" probably for Mt. Iuktas), whereas the third is always different and therefore is probably a personal name (or, in the case below, the names of two persons). Here is how

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the formula goes when it is complete (the place name and the names of two people as found on a libation table from Palaikastro):

		3: personal		4: Jasasara	
1: introduction	2: place name	names			
A-TA-I- [*] 301-WA-JA	A-DI-KI-TE	PI-TE-RI	JA-SA-SA-RA-ME		
		A-KO-A-NE			
<hr/>					
5: 'dedicate' ?	6: Ipinama	7: Sirute	8: 'and' Inajapa		
U-NA-RU-KA-NA-TI	I-PI-NA-MA	SI-RU-TE	I-NA-JA-PA-QA		

We do not understand the formula completely but we can imagine the sense of it to be something like, "Oh! at Mt. Dikte, Pierei and Akame dedicate [this] to Jasasara, something, something, and something."

The fourth script appears primarily on the Phaistos Disc (Pl. 7.7), a unique object found in a bin in the northeast corner of the palace (along with a Linear A tablet, but no distinctive pottery to suggest a date other than early Neopalatial at the latest). About the size of a large cookie, the disc was incised on both sides with a spiral and then stamped with individual metal stamps (like cookie-cutters) to create the signs that run along the spiral. Because some signs overlap their neighbors, we know that the inscription was stamped from the exterior to the interior, and probably should be read that way. Vertical lines divide the words, and every so often the last sign in a word receives an oblique stroke under it, as if to mark the end of a phrase. There are 45 different signs on the disc and 7 more on a bronze ax from Arkalohori; if there were more than 52 signs in the complete Phaistos signary, it too was probably a syllabary. Arranging the words by their apparent phrases (the oblique strokes), we can see that both sides end with similar series of phrases. The phrases on side A begin with similar signs, and those on side B end in similar signs, suggesting repetitious phrases on A and rhyming phrases on B. For these reasons, it is likely that the Phaistos Disc records a poem or song, or, if it is religious, as some suppose, a chant or hymn.²²

HOW MINOAN SOCIETY OPERATED: POLITICS
AND BELIEF SYSTEMS

If Crete in the Neopalatial period was heavily urbanized across most of the island, then it is difficult to imagine it fragmented into mutually exclusive states; instead, we should imagine a centralized political control, Knossos with some sort of hegemony symbolized by its throne, with secondary (Phaistos, Malia) and tertiary (Galatas, Gournia, Petras) regional centers, along with large (Chania) and small (Gournia) towns and farms (Ano Zakros, Zou; Ch. 6, pp. 150–52). The centers collected commodities as taxes from specialized producers and redistributed them to the general population. For this, the centers undoubtedly provided a navy and army to protect the population from piracy and brigandage, some kind of justice system to maintain order, a road system, and state-sponsored festivals and ceremonies that created a sense of divine protection and cultural identity. A similar set of functions characterized Mycenaean states, for which we have written as well as archaeological evidence (Chs. 12, pp. 292–303; 13, pp. 350–52, 354–6).

The dense urbanization also implies that the inhabitants enjoyed some kind of mobility. Under what circumstances a general freedom of travel could exist is difficult to imagine, or for what purpose other than commerce and pilgrimages to regional festivals. We have some evidence for business in the modern sense. Standardized weights and measures and complicated transaction documents reflect an agreed-upon system of exchange and procedure. Bronze “oxidized” ingots from many sites and a stone weight with an octopus in relief all weigh approximately a Minoan talent (29 kg or 64 lbs.). The inscribed **pithos** (large storage jar) from Ano Zakros states that it holds 32 Minoan units of wine. If filled to the brim it would have held 998 liters (or 32 units of 31-plus liters). But the pithos would not have been filled to the brim, and so the Minoan unit would have to have been less than 31-plus liters. If the Minoan unit was the same as the Mycenaean unit (28 liters) the pithos would have held 896 liters. Finally, an odd document sealing found at Chania was impressed twelve times with eleven seals, perhaps indicating as many as eleven individuals involved in a transaction. The Linear A documents, unlike those in Linear B, do not seem to characterize individuals or list large numbers of people. Only the Harvester Vase, a stone relief thyrion (below, p. 181; Ch. 6, p. 158), depicts a large undifferentiated group of male workers led by an important man and his overseers. The workers carry winnowing fans or flails but no produce; perhaps the scene represents nothing more than the owner of a villa leading his seasonal

agricultural workers to the fields or orchards. It is possible, therefore, to imagine much of the population free, and free to travel when they needed.

Society was ranked, however; the differences in domestic architecture (for example, the houses of Gournia that share partition walls, and the more elegant independent residences such as Nirou Chani (Pl. 6.7), villas, and farm complexes) and the differences in costume (long robes or work shorts for men) make it clear that people differed greatly in status and wealth. Evidence from frescoes also suggests that Minoan society was sex-segregated, at least at ceremonial gatherings. The Grandstand fresco portrays women in elegant flounced dresses sitting together and apart from a large undifferentiated red mass of men dressed (like the agricultural workers on the Harvester Vase) only in breechcloths with codpieces, their chests and limbs bare. In the Dance in the Grove fresco these lightly clad men and formally dressed women watch several women dance in what may be the West Court at Knossos.²³

The representations on sealstones and in frescoes show major gender differences as well. There are clear representations of powerful men and women, but their power is expressed in different ways. Female deities usually sit on a platform associated with a small built structure, perhaps an altar or shrine; animals and people bearing gifts approach them. In a couple of instances the women are accompanied by supernatural animals, a leashed griffin in the fresco from Xeste 3 at Akrotiri (Pl. 7.2), Thera, and “genii” on a gold finger ring from Tiryns on the mainland (but datable to the very end of the Neopalatial period). Far fewer representations depict what could be male divinities: men who stand between two rampant lions or who hold griffins on a leash.

Powerful human men also appear: men standing erect hold out a staff in front of them in the Commanding Gesture, as on the “Master” seal impression from Chania (Pl. 7.3), and on the Chieftain Cup from Ayia Triada; and in the ship fresco from the West House, Akrotiri, men sit bundled up either alone in open shipboard cabins or under awnings.²⁴ Several important human women can also be detected, but they are not obviously wielding or enjoying power. In frescoes and on gold signet rings women are portrayed in a variety of settings: kneeling in a luxuriant rocky landscape, dancing in a courtyard, getting dressed, picking crocus flowers, holding or fingering necklaces.

Several women and men toward the bottom of the social scale also appear. In frescoes from the West House at Akrotiri, a woman has fetched water from a fountain and now carries it back in a jar balanced

on her head; men take out goats and bring back sheep; soldiers in line march off to duty; and townsfolk, both men and women, eagerly expect the arrival of important men in festive ships, each paddled by a cramped line of hard-working sailors.²⁵

More women than men, however, appear in powerful roles, at a larger relative scale, and their importance seems assured by the number of them who sit on camp stools, stools like hassocks, and thrones (chairs with arm rails and backs). Besides the throne at Knossos, several other stone seats have also survived. Evans made the interesting comment that the tops of these seats have been hollowed to suit a woman comfortably.²⁶ The throne at Knossos faced a lustral basin and was flanked by benches, but in the other palaces we find only benches, no thrones; perhaps we can imagine a powerful woman on the throne at Knossos flanked by male counselors, and similar arrangements at the secondary centers. At Ayia Triada the benches in room 4 could seat more than twenty-five people – perhaps too many for a cabinet meeting! – and next door is another complex of a **polythyron** (room with pier and door partitions) and a narrow shrine that once contained a fresco of a kneeling woman in a luxuriant garden landscape with crocus and lilies. On the opposite wall is a mountainous scene with more plants, along with cats and agrimia. Connecting these scenes is a woman or goddess standing among myrtle plants in front of an architectural platform.²⁷

Women are not the only ones associated with religion; the stone relief vases depict only men at peak sanctuaries, but we know from the terracotta figurines left at peak sanctuaries that women attended them as well – perhaps at different times. For example, the Sanctuary Rhyton from Zakros depicts a peak sanctuary in its entirety, but no people (Pl. 7.1; above, p. 167); on the top of a mountain sits a shrine approached by steps all surrounded by a tall wall. Agrimia lie on top of the shrine and others scamper in a rocky landscape strewn with clumps of crocus plants whose flowers have all been plucked – except for one clump that retains most of its flowers. Does the vase imply that girls have been there, gathered the crocus, and left? And does the absence of human figures imply we should anticipate the next visit, that of men? Akrotiri's Xeste 3 fresco and paintings at Knossos identify only girls and monkeys as crocus-gatherers, an activity that probably took place in late October, when the autumn crocus produces the saffron stigmas.

Bull-leaping was probably another seasonal activity, perhaps in the late spring or early summer after calving;²⁸ it is possible that it and its subsequent events may have corresponded to the Bouphonia festival in classical Athens in early July. From various depictions in fresco,

on seals, and on ivories we can reconstruct almost the entire cycle: young men first had to net and subdue huge wild bulls of the now-extinct species *Bos primigenius*; at some point, youths also wrestled bulls to the ground, and may even have trained them, having presumably brought them back to palace compounds. Both young men and young women, to judge by the color conventions in fresco (red flesh for men and white for women), leapt the bulls, probably in the central courts (there are architectural arrangements at Phastos and Malia for providing temporary barricades along the sides to protect the spectators).²⁹

In the late Neopalatial period, the representations of bull-leaping have the leapers grabbing hold of the bull's horns, anticipating that the bull would toss its head obligingly back so the leaper could be flipped over the bull's head to land feet-first on the bull's back before finally jumping neatly off onto the ground. Front and rear assistants helped with the leap. And all this while the bull was charging! In the LM II–III period, however, the sequence changed: leapers stood on an elevated platform or on an assistant's shoulders and when the bull charged they flung themselves headlong over the bull's neck to push off with their hands on the bull's withers and execute a somersault before landing on the ground (Fig. 11.5b). Several seals and a panel on the LM IIIA Ayia Triada sarcophagus show the slaughtering and butchering of bulls, and it is possible that the bull-leaping ceremony ended with the sacrifice of the bull and general feasting.

There must have been other celebrations and ceremonies at other times of the year: the calendars of the classical period and of our own time are full of get-togethers to celebrate agricultural seasons and religious events. The Harvester Vase (above, pp. 178–9) portrays agricultural workers going out to the fields singing. If they are threshing wheat, as their flails suggest, this must have occurred in early summer, as their light clothing also attests. The naval procession depicted in the fresco from the West House, Akrotiri, probably celebrates the opening of the sailing season in late April. To predict these events, the Minoans must have had some notion of astronomy, heliacal risings of important stars like Sirius, and the procession of the zodiac – peak sanctuaries would have offered ideal locations for studying the stars.³⁰

The most vexing problem for students of Minoan culture is the secure identification of rulers and gods. The goddess in the fresco from Xeste 3, Thera, attended by extraordinary animals and girls (Pl. 7.2), may correspond to Artemis (known in Linear B),³¹ but other depicted divinities are difficult to identify by name. Because mythological animals such as griffins, sphinxes, Minoan geni, and winged agrimia logically

belong to the divine world, the human figures they attend (the seated woman amongst the crocus gatherers in Xeste 3, Akrotiri, and the male figure on the Benaki sealstone [above, p. 169]¹²) should be divinities. Without these mythological creatures, other humans in powerful poses such as the Commanding Gesture or being saluted by other humans are probably powerful mortals.

The prominence of females in Neopalatial art, important mortal women and goddesses (by the definition above), makes it possible to imagine that women dominated Neopalatial society, perhaps even politics. All human societies, however, ancient and modern, have been patriarchies with men in positions of authority; no matriarchy has ever been documented. But Neopalatial Crete offers the best candidate for a matriarchy so far. If Neopalatial Crete was matriarchal or partially so (in religious matters?), we might imagine that when the Mycenaeans took Crete over, presumably after LM IB, they imposed a patriarchal system, perhaps even violently, thus accounting for the LM IB destructions by fire and the concomitant loss of many Minoan art forms, many of which are religious (see, however, Ch. 12).

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