CHAPTER 7

THE GENESIS OF MONUMENTS IN ISLAND SOCIETIES

Michael J. Kolb

One important way archaeologists examine past social relationships is by studying durable monuments. Monuments, such as elaborate tombs, large temples, and elite palaces, are usually the products of complex societies, where they serve as testimonies of social authority and prestige. Unlike more private forms of architecture such as houses, monuments serve as public focal points and places of community interaction, built to communicate very specific meanings about how to become a member of a larger social whole, how to interact collectively. Their more complex architectural grammars (with plazas, expansive doorways, or passageways) create a spatial map that is acted on through movement, translated through spatial experience, and physically communicated by anchoring social meanings in space. And as individuals move around or through monumental spaces, they experience and translate these public meanings.

One of the most critical dynamics of large public monuments is the act of their physical construction. A motivated labor force orchestrating and executing a coordinated building plan represents no better example of how to generate collective thought. Up to thousands of laborers were utilized in constructing the most sophisticated and greatest of the world's monuments, demonstrating that as the size and complexity of a monument begins to exceed its practical function, so does its collective vision and symbolism expand. Monumental architecture directly communicates, in a public and enduring fashion, that the greater the monument the more orchestrated the collective effort involved. And as a form of collectiveness they create social messages that are fundamentally different than those conveyed by the domestic house. Monuments steer individuals away from any notions of privacy through discourses of the collective public.

In this chapter, I undertake a comparative analysis of island monuments to understand some of the variables associated with their construction

and elaboration. Smith and Peregrine (Chapter 2) discuss the various approaches to comparative analysis in the archaeology of ancient complex societies. Islands represent excellent study areas because of the additional degree of geographic and social circumscription that is usually present, and because some of the most impressive examples of monumentality occur on islands. The test case studies include three islands from the Pacific and three islands from the Mediterranean. They are: (1) the *abu* temples and monoliths of Rapa Nui (Easter Island); (2) the *heiau* temples of Maui (Hawaiian Islands); (3) the *lulung* burial and habitation platforms of Pohnpei (Micronesia); (4) the *talayot* towers of Menorca (Balearic Islands); (5) the temple and funerary complexes of Malta and Gozo; and (6) the palaces of Minoan Crete (Figure 7.1). The goal is to obtain a more precise understanding of how monuments are utilized. Three questions become predominant: (1) How and why do certain types of social and ritual elaboration assume monumental proportions? (2) What are the functional and morphological similarities and differences of these monument types? and (3) What was the basis of power associated with the construction of these monuments? In this volume, Peterson and Drennan (Chapter 6) and Fletcher (Chapter 11) also deal with related aspects of monument construction in ancient societies.

Pacific Islands

Rapa Nui. The first test case is the temples and stone statues of Rapa Nui (Easter Island) in eastern Polynesia. Rapa Nui is the smallest (164 km^2) and most geographically isolated of our island test cases and its colonizers migrated from central Polynesia no later than A.D. 600–700, beginning to construct a unique type of monument that included multi-ton stone torso statues for ancestor worship. Numerous syntheses exist for Rapa Nui and its monuments (e.g., Diamond 2005; Flenley and Bahn 2003; Kirch 2000; Martinsson-Wallin 1994; Pavel 1990; Van Tilburg 1994; Van Tilburg and Ralston 2005).

More than 300 *abu* temples and 700 *moai* statues were rapidly constructed between A.D. 1100 and 1500. *Abu* architecture evolved from the central Polynesian *marae* stone platform shrine with its altars, huts, and statues. *Abu* are dispersed along the coastline at intervals of approximately 0.75 km (except for high cliff areas). The typical *abu* measures 3 m in height and 720 m^2 in area (see Martinsson-Wallin 1994: Appendix A). A 1-m high retaining wall is found on the seaside edge, denoting the rear section of the *abu*. The *abu* platform was built using dry-laid rock fill, and then paved over with smooth stones. An entrance ramp was placed on the land-side

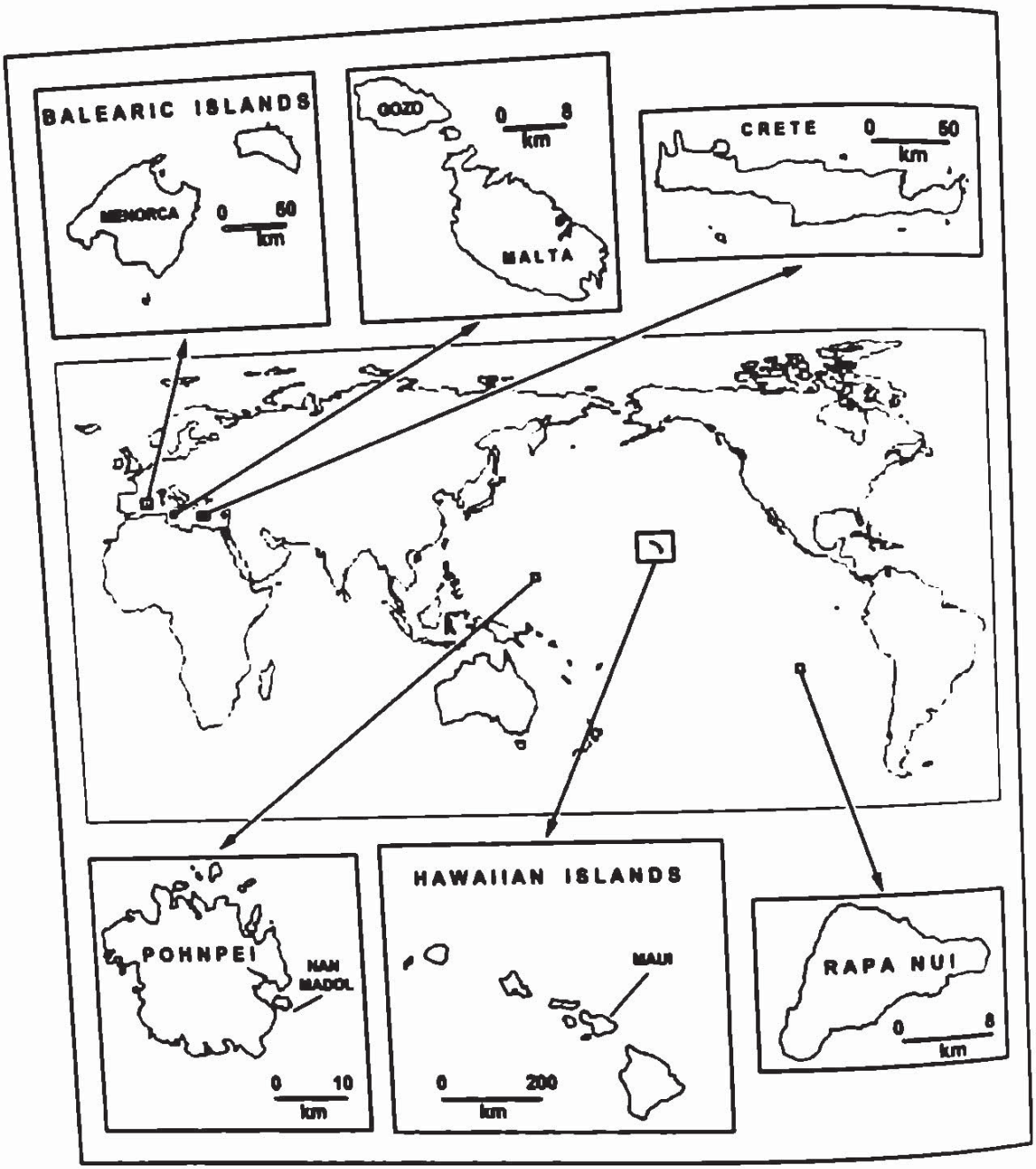

Figure 7.1. Locations of the islands mentioned in the text.

edge and was surrounded by more paving stones (Figure 7.2, A). Of the 313 remaining *abu*, 125 contained *moai* statues that face land-side. The others may have had wooden statues.

The *moai* stone statues are truly unique. Archaeologists have documented 887 *moai*, the majority as carved human head and torso in minimalist style. Almost all come from the volcanic tuff of the Rano Raraku volcano; approximately 55 statues were carved from stone material from other parts of the island. The typical statue measures 4 m tall and 12 tons in weight. Because of

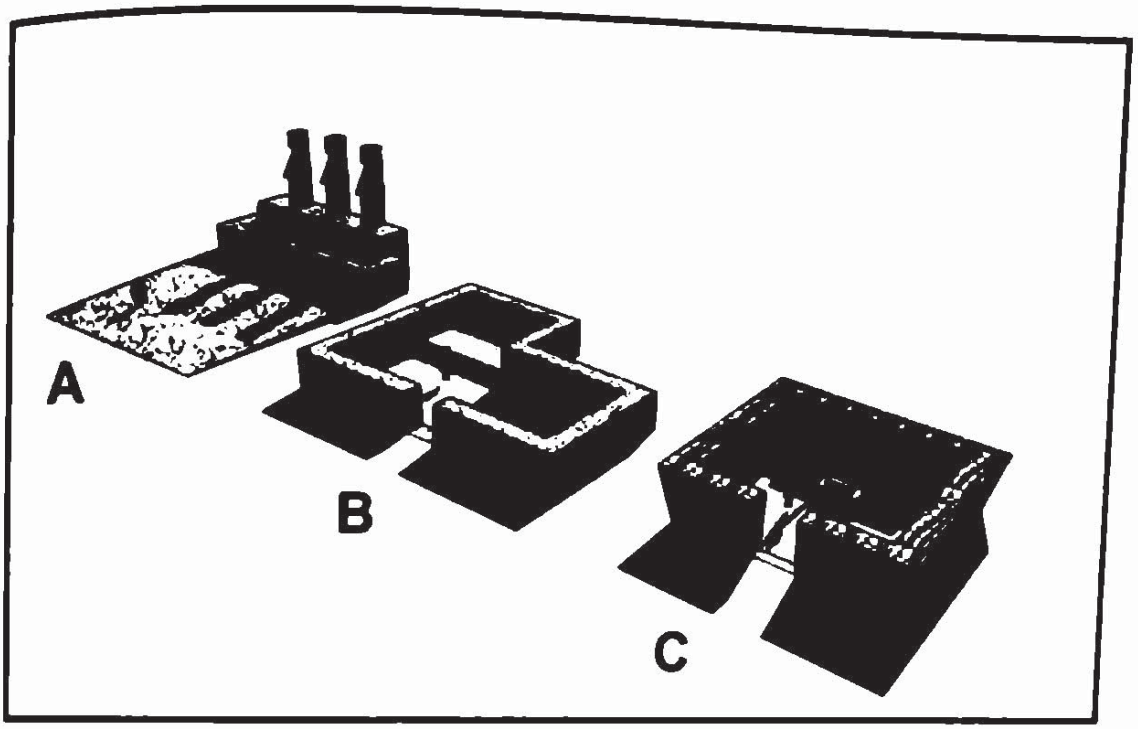

Figure 7.2. Schematic views of typical Oceanic monuments: A: Rapanuian *ahu* platform with *moai* statues; B: Mauian *heiau* temple, C: Pohnpeian *lulung* platform.

excessive transporting costs, only about 288 statues (25 percent) were successfully moved and installed on *ahu* platforms. Another 397 statues remain abandoned at the quarry of Raraku Rarku, including the largest statue (20 m tall and more than 200 tons). Another 92 were abandoned in transit along the prepared roads outside the main quarry. Statues were installed with their backs to the sea, facing the accompanying ceremonial area and nearby village. Many have bas-relief etchings on their backs (perhaps tattoos of rank) and carved loincloths. Most statues are sexually ambiguous, although some have traces of a beard or etched vulva. Most installed *moai* were given finishing touches, including carved eye sockets and headdress.

One of the earliest Rapa Nuian ritual structures is Ahu Tahai, located on the island's western shore. Ahu Tahai was originally a small platform dating to A.D. 690 and then rebuilt around A.D. 1200. It possessed an early-style red scoria statue that was tipped over into the fill of the later platform extension and then replaced with five Rao Raraku tuff statues. Other rebuilt platforms contain early statues as well, including Ahu Tongariki, Ahu Heki, and the inland *ahu* of Ahu Akivi. The early-style red scoria statues found in the fill of these rebuilt platforms are less stylized that later statues and similar in design to the "tiki" images of central Polynesia, with naturalistic heads and ears. Many early single-statue open-air altars probably existed, some perhaps built with a courtyard in the typical central Polynesian fashion.

Monumental construction on Rapa Nui peaks by A.D. 1400. The most elaborate *abu* is Ahu Tongariki, located on the south coast approximately 1 km from the quarry of Rano Raraku. Ahu Tongariki was constructed in multiple construction phases and has a length of 60 m and a volume of 23,000 m^3. Given its proximity to the quarry, it houses fifteen *moai* statues including an 86-ton giant. Sometime after A.D. 1500 (and maybe as late as A.D. 1770), profound sociopolitical and religious changes in Rapa Nuian society resulted in the cessation of statue carving and the modification or destruction of most *abu* platforms. *Moai* statues were intentionally toppled over, and many *abu* became burial locations for human remains. The reasons behind such drastic change are debated (e.g., Diamond 2005); the most likely is the rise of internecine warfare tied to degradation of the environment, population pressure, and/or rising social stress.

The Rapanuian monuments document emerging elite religious power in a highly constrained environment. The *abu* platforms with their *moai* statues were used as ceremonial "meeting places" for ancestor worship, similar to features in other Polynesian societies. Each statue immortalized a high-ranking ancestor of the local village (a deeply rooted Polynesian tradition), and the enhanced spiritual role given these statues was a trait shared with the Society Island upright stones and the Hawaiian carved wooden images. The Rapanuian statues stood protectively over a neighboring village, serving as a perpetual reminder of the villagers' link to both the spiritual world as well as a temporal link to the surrounding countryside.

It may appear that considerable effort was invested into *moai* statue carving and transportation from A.D. 1100 to 1500, especially given the small population size and extreme isolation of the Rapanuian inhabitants. However, twenty individuals could easily carve a statue in their spare time within one year (Pavel 1990), whereas fifty to seventy-five people could haul a statue 15 km in the course of a week (Van Tilburg and Ralston 2005). Transportation was clearly the greatest logistical effort; including the construction and maintenance of V-shaped roads, the manufacture of large qualities of rope, the growing of foodstuffs to be used as lubricants, and the culling of wood to serve as harnesses and leavers. The organic goods, particularly the rope and wood, were of limited quantity on such a small island. Total food requirements during the four hundred years of statue construction increased 25 percent (Van Tilburg and Ralston 2005), and may have contributed to overexploitation and eventually decline in availability of such materials, probably contributing to the end of statue carving.

At first glance, it may appear that the monuments of Rapa Nui were constructed by some sort of centralized hierarchy. The grandiosity of the

statues, the detail of their stylistic design, and the laborious efforts of a small population to carve and construct all suggest some sort of controlled coercion. Nevertheless, ethnohistorical and archaeological evidence indicate that ritual power was in fact decentralized among a series of rival kin groups. The argument that intergroup social competition drove monumental elaboration is supported by the ease of *abu* construction and *moai* statue carving, the fact that so many statues were carved but not moved, the lack of any clear central monumental place, and the equal distribution of monuments across the landscape.

Maui. The monumental structures of Maui in the Hawaiian archipelago of East Polynesia are called *heiau* temples. At the time of European contact in A.D. 1778, chiefs in the Hawaiian archipelago had implemented a temple network to provide the proper infrastructure for expressing the ideology of kingship, feudalizing land tenure practices, imposing ritual taboos on labor and production, and engaging in internecine warfare over territory (Cordy 2000; Earle 1997; Kirch 1985; Kolb and Dixon 2002). A number of ethnohistorical and archaeological syntheses have been published on the Maui *heiau* (Kolb 1992, 1994, 1997, 1999, 2006; Kolb and Dixon 2002; Valeri 1985).

Similar to the Rapanuian ahu platform, *heiau* architecture has its origins in the central Polynesian *marae* platform shrine. The typical *heiau* measures 2 m high and 424 m^2 in area. These features were dispersed along the coast or in the island interior. More than 250 *heiau* temples were present on Maui according to ethnohistoric data, although only 108 remain today. *Heiau* structures had dry-laid lava rock foundations with stone altars, offering pits, and the foundations of thatched houses and wooden images (Figure 7.2, B). Three general functional categories have been identified archaeologically with the excavation of eight Maui temples: (1) small open court ancestral shrines, (2) large platform temples used for major political rituals and feasts that helped glorify successful chiefly lines, and (3) smaller enclosed temples used for local rituals and feasts that promoted collective cosmological principles and encouraged consensus among political groups. Oral histories of the Hawaiian temple system indicate the presence of several functional types (Valeri 1985:172–83), and temples ranged in size from family structures (~200 m^2) to medium-sized community shrines (~650 m^2) and larger polity temples (upwards of ~2,000 m^2).

The general trend of temple construction followed four phases between A.D. 1200 and 1800 (Kolb 2006), and those phases correlate with general sociopolitical trends distilled from ethnohistory. These include

(1) the formation of district-sized polities and the rise of chiefly prerogatives, (2) the expansion of the chiefly hierarchy and a bifurcation of the island into eastern and western kingdoms, (3) island unification and a shift in land tenure, and (4) inter-island competition and eventual absorption into a larger incipient state. An important shift in temple construction and use coincided with island unification and a shift in land-tenure and occurred by A.D. 1650.

The *heiau* temple of Pi'ilanihale in east Maui (Figure 7.3) represents the largest and most architecturally complex example in the Hawaiian archipelago (Kolb 1999). It was built in four building episodes with visible architectural seams that are indicative of the dynamic nature of the growth and function of the site. The first building episode (A.D. 1400) was the most impressive in terms of size and complexity (9,363 m^2), rivaled only by the construction of the war temple of King Kamehameha in A.D. 1791 (Fornander 1969, 2:327). Adjacent terraces were added to the west and east by A.D. 1650, similar to the addition of wings on the Rapanuian *ahu* platform. Pi'ilanihale was originally used for some sort of public ritual or assembly function. The two winged additions served as affiliated residential areas for elites, and were closely associated with the ceremonial or public meeting area of the central terrace, which retained its function over time.

Overall, the Maui *heiau* temple system followed a cycle of construction and use characteristic of the incipient state development experienced by the Hawaiian archipelago. Temple construction phases coincided with distinct periods of political tension when it was important to encourage and control social allegiances.

Pohnpei. The monuments of Pohnpei in central Micronesia represent another example of architectural elaboration. Pohnpei is a high island (330 km^2) that was initially inhabited before A.D. 1. Its population likely peaked at 20,000, organized into a series of nominally independent political units at the time of European contact. A number of syntheses discuss the Pohnpeian monuments and their chronology (e.g., Athens 1983; Ayres 1979, 1993; Ayres and Mauricio 1997; Bath and Athens 1990; Kirch 2000:194–201; Rainbird 2004, 2007).

The typical Pohnpeian monument was the *lulung* burial, a walled platform enclosure constructed of stacked basalt columnar prisms. The average basalt column was 8 m long and weighed several tons, placed in header-stretcher fashion similar to the knitting of logs when building a log cabin. The *lulung* functioned as a combined sleeping platform and walled tomb, its size reflecting the social status of both occupant and clan. The typical

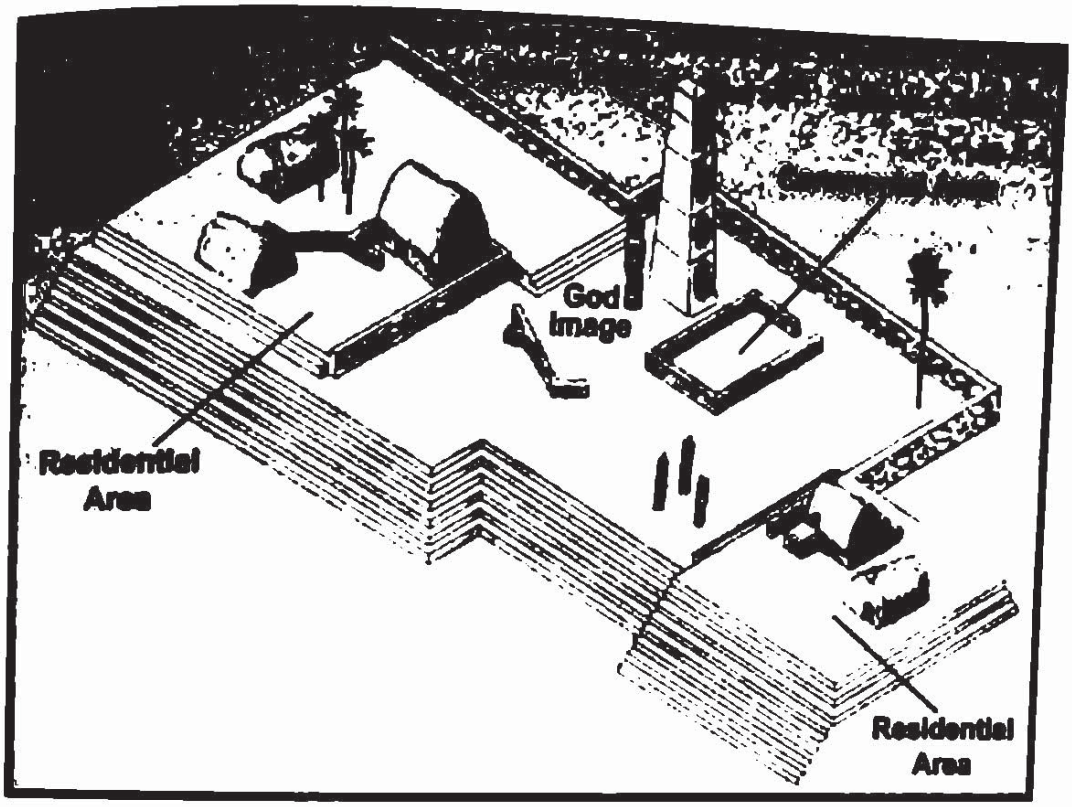

Figure 7.3. Schematic view of Pi ilanihale temple on Maui. Drawing by Niel Colwell.

lulung was 250 m² surrounded by a 3-m high circumference wall (Figure 7.2, C). It is unknown exactly how many *lulung* burials were constructed, but hundreds have been located. The tidal reef city of Nan Madol has the largest concentration of *lulung* burials; ninety-two *lulung* built as islets in the shallows of an 81-hectare lagoon. Islets were separated by narrow waterways that flood during high tide. Nan Madol had two separate wards: an inner cluster of thirty-four residential platforms and an outer seaward array of fifty-eight ritual and *lulung* islets. A massive sea wall (up to 10 m thick in places) protects the southeastern edge of Nan Madol, stretching at least 1,000 m along the border of the city (Morgan 1988). Nan Madol was constructed using more than 750,000 tons of columnar basalt, outcropped or quarried from various sources (Ayres, Goles, and Beardsley 1997).

The lagoon and sandy shoals of Nan Madol were first occupied by A.D. 900. Expansion continued until A.D. 1600, after which time residence was mostly abandoned. The earliest constructed islets were near shore, an area later comprised of large and small basalt and coral-filled platforms used as residences, meeting areas, and storage facilities. Four large islets (at least 8,000 m²) dominate this residential area, the largest (called Pahnkedira) being the reputed residence of island rulers. Pahnkedira is subdivided into five major courtyards by large basalt walls. These courtyards were used as

residential areas, a sacred altar, and a meeting area for holding court and religious worship. The entire structure was built using 44,000 m^3 of basalt and coral fill.

The outer array of fifty-eight *lulung* islets at Nan Madol that served as the ritual and mortuary sector was slowly expanded outwards from shore. The largest islet is called Nandauwas, a double-walled enclosure with an area of 3,100 m^2. Nandauwas was the sepulcher for a ruling line of Pohnpeian elites called the Saudeleur hegemony, a group who ruled all of Pohnpei. It consists of 18,000 m^3 of fill and has a foundation that is 3 m above sea level and a 6 m thick and 5 m high enclosing wall. A second interior enclosure surrounds an inner burial chamber, which is a 7 × 6 × 1.5 m platform topped with twelve basalt columns 8 m in length. Additional burials are located between the outer and inner walls. Nandauwas is located adjacent to the main sea wall entrance, forcing all canoe-going visitors to pass by and thus pay reverence to the elites buried there.

Oral history and archaeological data indicate that the elaboration of Nan Madol from A.D. 1000 to 1500 was indicative of island centralization and formalization under the Saudeleurs, when the city served as a ritual and trade center (see Kirch 2000:200; Rainbird 2007). The city's restricted seaside entrance, its array of *lulung* burials, and its elite residences formally organized and directed the activities associated with social exchange networking (e.g., collection, storage, and presentation of tribute, including canoes laden with basalt building materials). The eventual abandonment of Nan Madol likely coincided with the collapse of the Saudeleur hegemony, and it has been hypothesized that a possible expansion of other island political centers began at this time, including the fortified hilltops of Sapwtakai and Ohlapel (each approximately 2 hectares in size), as well the rise of a similarly designed city at Lelu on the island of Kosrae, some 600 km east of Pohnpei.

Mediterranean Islands

Menorca. The monumental phase of Menorca in the Balearic Islands of the Mediterranean is called the Talayotic Period and spans a broad period between about 1700 and 123 B.C. Less work has been done on these monuments than on those from other island groups, but a number of important syntheses do exist (Calvo Trias et al. 2001; Gómez Bellard 1995; Gasull et al. 1984; Patton 1996; Plantalamor and Rita 1984; Rita 1988; Waldren 1982, 1992). The *talayot*, a tower-like structure similar to the Sardinian nuraghic towers (Waldren 1982), is the predominant monument feature of

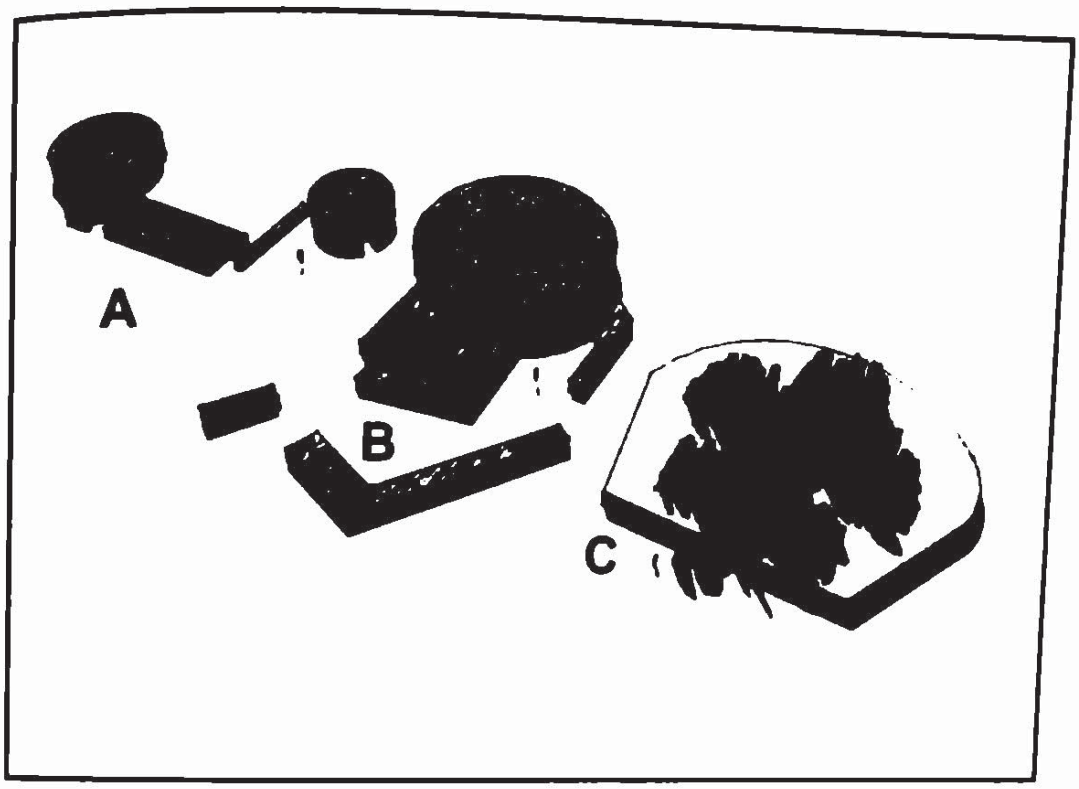

Figure 7.4. Schematic views of typical Mediterranean monuments: A. Menorcan *talayot*, B. Cretan *tholos* tomb (the site of Moni Odigitria after Meyers and Cadogan 1992); C. Maltese temple.

the island (although others exist such as the *naveta* burial tomb and *taula* sanctuary). A *talayot* may be square, round, oval, or stepped in form, averaging 12–20 m in diameter and containing a massive central roof pillar. The *talayot* tower is usually found at the center of a settlement, or built adjacent to defensive walls. Some settlements have more than one *talayot*. More than three hundred of the structures are still preserved on Menorca (Figure 7.4, A).

The *talayot* monuments were built during the Talayotic Period (1700–123 B.C.) but trace their origins to the megalithic chamber tombs, fortified enclosures, and standing menhir stones of the Pretalayotic Period (Gómez Bellard 1995; Rita 1988). Settlements from the Pretalayotic Period, such as Ferrandell-Oleza on Mallorca, often incorporate central tower-like structures (Waldren 1982). Material culture indicates a clear link with the Iberian mainland, and includes such things as metal and Bell-Beaker pottery (Chapman 1985:145). The circular *talayot* style was developed earliest and eventually evolved into the square and stepped forms (Waldren 1982). The functions of *Talayot* are unclear, but they may have served as defensive structures, community storage areas, or possibly as loci for ceremonial community feasting (see Gasull et al. 1984). The chronology of these

monuments is still somewhat imprecise given the paucity of modern systematic excavations, but we do know all three monument types were built in the late Bronze Age, between 1400 and 800 B.C., and were used simultaneously. The *talayot* does bear a resemblance to the towers of Sardinia and Corsica even though the Balearic Islands are clearly linked to the Iberian mainland (Patton 1996:94).

Malta. The monuments of the Maltese islands are the oldest of the island test cases. They are located on two islands, Malta and Gozo (combined area of 383 km²). These temple and funerary complexes, built in the Copper Age (c. 3600–2500 B.C.), represent some of the earliest worldwide monuments ever built. Little is known about the builders of these structures. The original inhabitants of the Maltese Islands had clear affinities to the Neolithic Stentinello culture of Sicily (ca. 5000–4500 B.C.), and were farmers who grew cereal crops and raised domestic livestock. A number of syntheses exist regarding the Maltese temples and their chronology (Bonanno et al. 1990; Evans 1984; Lewis 1977; Patton 1996; Stoddart 1999; Stoddart et al. 1993; Trump 1972, 2002).

About forty temples are distributed on both Malta and Gozo, often in complexes. The seven largest complexes consist of a perimeter wall encircling two or more adjacent temples. Each temple is distinct in layout and size, but all have the apsidal chamber as a basic architectural element. The typical apse is a curved hemispheric room averaging 6 m in diameter, but tapered toward the top. It has a horizontal arch entryway consisting of a post-and-lintel trilithon. An apse had no stone roof, but was probably covered with suspended rafters covered in thatch, wattle and daub, or animal hides. Each temple was built with multiple apses, usually laid out in paired or trefoil (leaf-shape) groups. Styles ranged from three to six apses per temple (Figure 7.4, C).

Ggantija (or giantess' tower) on Gozo is the largest and best-preserved example, consisting of two temples built 6 m high. The southern temple was constructed about 3400 B.C. and is 27 m long with five chambers. The northern temple was constructed around 3000 B.C., and is 19.5 m long containing four chambers with a fifth central chamber the size of a small niche. A massive curvilinear wall surrounds both temples. The space between the temple walls and the perimeter wall is filled with earth and rubble. The most elaborate temple complex is at Tarxien (pronounced Tar-heen) on Malta, consisting of three temple structures built after 3100 B.C. A large central six-apse temple was built last. Doorjambs and holes were used to restrict access between apses. The remains of an older abandoned temple

lie nearby. The Tarxien temples contained significant numbers of "cult" objects found in the innermost apses, including pottery, carved female figurines, animal bones, and spiral wall cravings. The earliest temple is located at Skorba on Malta, a small shrine dating to 4100 B.C. and the precursor to later monumental structures. This shrine was the largest building of a small village with a D-shaped room and paved courtyards. The shrine contained female figurines, polished cow bones, and mutilated goat skulls.

Two large funerary complexes are associated with the Maltese temples. Both are below ground but follow the same modular design as the temples, being composed of carved rock niches and cavities. The Hal Saflieni Hypogeum at Tarxien is an expansive subterranean structure with large uprights of coralline limestone. It remains the most extensively excavated funerary complex, and was built in three successive phases. The first was a simple tomb built around 3000 B.C., about 2 m in diameter and averaging 2 m below ground. This cemetery space was eventually extended both above and below ground over time. The Brochtorff Circle on Gozo is centered between the Ggantija group and another temple complex (see Bonanno et al. 1990). Artifacts include articulated and disarticulated human remains, small terracotta female figurines and statuettes, and imported goods.

The chronology of construction for the Maltese temple and funerary complexes is lengthy (see Stoddart et al. 1993). The antecedents of these monuments are the shrines and upright stones of the Skoba and Zebbug phases (ca. 4500–3800 B.C.). The temples and funerary complexes were first constructed during the Ggantija phase (ca. 3600–3000 B.C.), and expanded and elaborated during the Tarxien phase (ca. 3000–2500 B.C.). The temples were abandoned during the Tarxien Cemetery phase, at which time funerary rituals switched to the use of new cremation cemeteries (ca. 2500–1500 B.C.). The earliest temple style was the simple lobed design, with a central court and irregular-shaped apses. Then followed the trefoil style that had three apses opening symmetrically off the central court. Some five-apse temples were also built. By 3000 B.C., five-apse temples were converted to four-apse structures by walling off one apse to make a small niche. Many central apses of earlier trefoil temples were also walled off.

The Maltese monuments provide a glimpse into the nature of emerging elite religious power (e.g., Stoddart 1999; Stoddart et al. 1993). One important debate has focused on territorial control of rival and competing social groups (Stoddart et al. 1993:17). Renfrew and Level (1979) argue that these temples signal inter-group competition and political centralization. As temple centers and their population increased (perhaps as many as two thousand per group), competing groups built successively larger

monuments as emerging elites organized and directed temple construction and use (Renfrew 1974). Others have argued that ritual power was instead decentralized with competing religious factions (Meillassoux 1964, 1967). The lack of any single central place, coupled with the recurrent pairing of temples, supports the argument of decentralized intra-group social rivalry and completion (Bonanno et al. 1990). In either case, it is clear that emerging leaders increased control over ritual practice and the ceremonies associated with the afterlife.

Another debate centers on the rise of the cremation cemeteries after 2500 B.C. (see Bonanno et al. 1990; Stoddart et al. 1993; Trump 1977). One argument is that this shift represents the abandonment settlements on Malta and Gozo, followed by eventual migration of new peoples to the islands (Trump 1977). Stratigraphic evidence at Tarxien has revealed a long period of abandonment before the conversion to a cemetery. Another argument is that these cemeteries represent an internal shift in religious expression (Bonanno et al. 1990). A third possibility is that this shift represents a new way that elites are doing business, with religious control "giving way" to a broader-based economic control of external trade (Stoddart et al. 1993). With their ritual power slowly waning in the wake of increased external trade contacts, the Maltese elite followed their peers on Crete by exerting their control on trade goods.

Crete. The last example of Mediterranean monumental elaboration is the labyrinthine structures of Middle to Late Bronze Age Crete (ca. 2200–1200 B.C.), the largest of island test cases (8,336 km^2). Much has been written about the Minoan culture and its "palaces" of Homeric legend (e.g., Driessen et al. 2002; Graham 1987; Hägg and Marinatos 1987; Hamilakis 2002; Kolb 2004; MacGillivray 2000; Manning 1994; Patton 1996; Rehak and Younger 1998; Renfrew 1972; Watrous 1994), even though their true function is debatable. The Minoans are regarded as the Mediterranean's first large complex society, replete with political centralization, organized government, recordkeeping, specialization of labor, and mass-produced trade goods.

Four labyrinthine palaces were constructed on Crete by 1900 B.C.: Knossos (13,000 m^2), Mallia (7,600 m^2), Phaistos (6,500 m^2), and Zakros (2,800 m^2). They were built using cut-stone masonry and recessed façades, embellished with decorated engravings, painted stucco, veneering, and clay ornamentation. Each palace was a multi-story building consisting of a series of recessed and projecting rectilinear architectural units, giving the entire structure an irregular shape and labyrinthine appearance. Vertical pillars

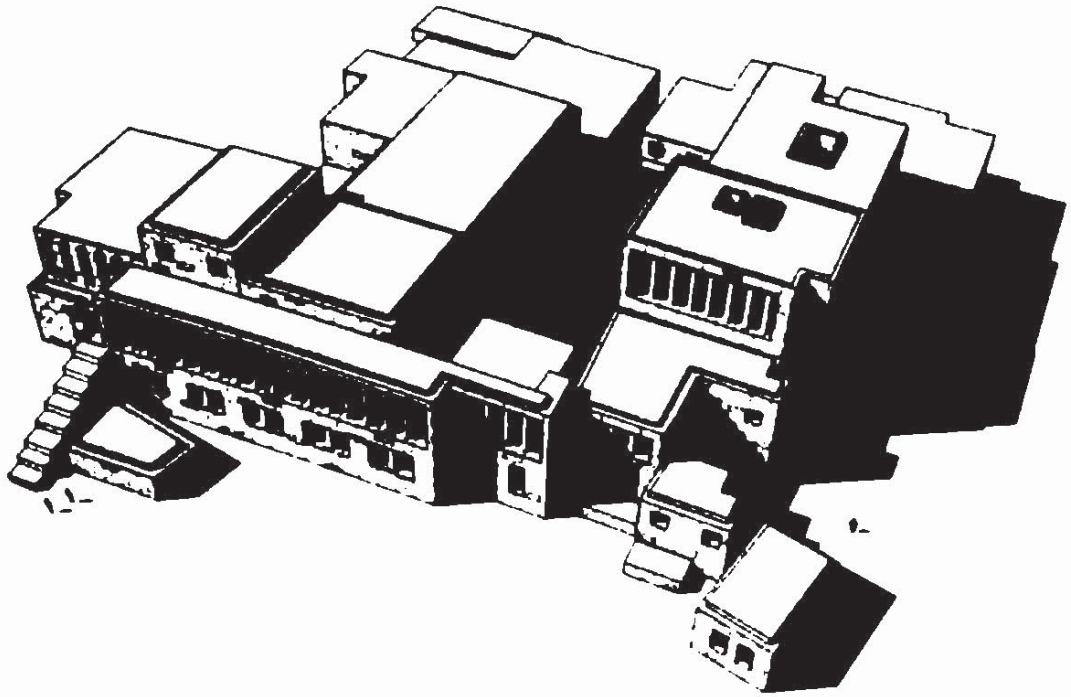

Figure 7.5. Schematic view of the palace at Knossos. Modified after Evans (1921)

included a startling variety of forms, often clustered in particular combinations. The palace at Knossos is shown in Figure 7.5. Palaces were located at places thought to have religious significance and/or provide easy access to the sea.

All palaces contain key architectural features that include: (1) public spaces; (2) clusters of similar room/hall units; and (3) storage magazines and grain silos affiliated with sunken cult rooms. The most prominent feature is a rectangular central court, oriented slightly east of a north–south axis with dimensions that are 2:1 in size proportion. This orientation dictated the general layout of the entire structure, important for optimal sunlight exposure, recognizing sacred mountains and caves, or exposing certain rooms to the rising sun (Shaw 1973). Minoan art and frescoes suggest a variety of court rituals such as bull leaping and group dancing (Davis 1987; Sipahi 2001; Younger 1995), but other possibilities include feasting, astronomical observation, and ceremonial displays. The central court at Knossos held as many as 5,435 people (Gesell 1987), the equivalent of one quarter of the estimated total population of Neopalatial Knossos (Whitelaw 2001:27). Additional public spaces include a plaza entryway at Knossos, Mallia, and Phaistos (see Davis 1987; Marinatos 1987, cf. Driessen et al 2002), a second-story reception hall at all the palaces, and small auditoriums at Knossos and Phaistos. Possible activities for these secondary public

spaces may have included political assemblies, religious gatherings, sporting events, or entertainment.

In contrast to public spaces, the private room/hall units give each palace its maze-like appearance (see Graham 1987). These units, dubbed "Minoan halls," consist of two unequally sized rectangular rooms separated by a row of pillars and piers where a retractable door was set for permitting or restricting the access of movement, air, or light. Some halls also include a third, more private room that contains a short flight of doglegged stairs leading to a toilet and a decorated "lustral basin." This third room may have been used for simple bathing or ritual initiation/purification/rite of passage. In sum, each unit probably served a multi-functional role as living/meeting/ceremonial spaces. A stairway fresco at Knossos and the presence of tablets or sealing archives suggest these rooms may have been used as a meeting place for bureaucratic recordkeepers.

A large amount of palatial space was devoted to storage magazines. These long and narrow rooms were located to the west and north, and commonly contained *pithoi*, large clay storage jars often several feet tall (see Christakis 1999). Storage items probably included grain, wine, olive oil, textiles, and smaller pottery vessels. Large cylindrical semi-subterranean grain silos are also present. At the three largest main palaces these silos were placed in prominent locations outside the west façade in or near the west plaza, suggesting they also served a ritual or symbolic function. Cult rooms known as "pillar crypts" with single or double pillars (see Graham 1987) are closely associated with the storage magazines. The pillars frequently bear carved mason insignias, particularly the prominent Minoan cult symbol of the double-axe. Some also contain pyramidal stone stands for mounting double-axes or other cult emblems.

The construction chronology of Minoan palaces is long and complex. The palaces were first constructed during the Protopalatial Period (ca. 1900–1720 B.C.) and were rebuilt or modified during the Neopalatial (ca. 1720–1470 B.C.), and declined and then abandoned after the violent eruption of Thera ca. 1470 B.C. (cf. Driessen and. Macdonald 1997). Discussions of palatial emergence have emphasized local social, economic, and political factors (e.g., Cherry 1983, 1986; Graham 1987; Hägg and Marinatos 1987; Hamilakis 1999; Hansen 1988; Knappett and Schoep 2000; Manning 1994; Renfrew 1972; Sherratt 1981). General consensus is that the palaces helped an emerging elite class to accumulate and redistribute vital resources such as food and specialized craft items, although specific economic and social motivations are debatable and may include forced specialization, environmental instability, economic control, or trade monopolization.

Table 7.1. Islands and their monuments: descriptive data

	Island		Monuments			
	Area (km²)	Isolation index[a]	Number	Density (/km)	Avg (m²)	Total area (h
Rapa Nui	164	149	313	1.9	341	10.7
Maui	1,903	118	250	0.1	924	23.1
Pohnpei	316	108	92 + (1 center)	0.3	1,708	15.7
Menorca	693	35	300	0.4	177	5.3
Malta/Gozo	383	35	40	0.1	324	1.3
Crete	8,336	28	5	0.0006	7,475	3.7

[a] The index of island isolation is calculated by totaling the square roots of the distances to the nearest equivalent or larger island, the nearest island group or archipelago, and the nearest continent. As presented by the United Nations Environmental Programme, located at http://islands.unep.ch.

More research is required to clarify the architectural origins of the Minoan palaces. One potential forerunner of the palaces is the rectangular-shaped "house tomb" and beehive-shaped "*tholos* tomb" of the Pre-Palatial Period (e.g., Branigan 1970, 1993; Goodison 2001; Watrous 1994:715). These slab-lined, collective-style tombs are built on a monumental scale, with house tombs averaging more than 1,000 m² and *tholos* tombs often built with adjacent enclosed courts and an annex of auxiliary rooms built against the circular wall near the entrance (Figure 7.4, B). Sacrificial and ritual activity in some of the adjacent room annexes suggests some sort of worship tied to the dead (Murphy 1998). Perhaps these tombs served as inspiration for a burgeoning Minoan elite class, who after being bolstered economically by trade contacts with Egypt and Mesopotamia, were roused to create a series of administrative and religious "palaces" that followed their own culturally distinctive design.

Comparisons

Quantitative Data. Table 7.1 presents some general descriptive data regarding the six test cases and their monumental sequences. The following variables are used for comparison:

1. Island area (km²).
2. Island isolation index. Based on the United Nations Environmental Programme (http://islands.unep.ch), this measure is calculated by totaling the square roots of the distances to the nearest equivalent or larger island, the nearest island group or archipelago, and the nearest continent.

3. Total number of monuments on an island.
4. Density of monuments (monuments per km^2). Variables 3 and 4 measure the degree of dispersal of monumental space.
5. Average monumental size in m^2. This is a measure of relative labor investment.
6. Total monumental area. This is the sum of the areas of individual monuments; it represents an approximation of how overall space was utilized for collective social activities.

The earliest monuments are the Malta and Gozo temples. They flourished between 3600 and 2600 B.C. in a region that was somewhat isolated within the Mediterranean itself, but according to the Isolation Index (II = 35, 96 km to nearest isle, 96 km to nearest island group, and 240 km to the nearest continent) had easy to moderate access to neighboring landforms. The average monumental structure on Malta/Gozo was quite small, the total area of monumental construction was also small, and they were fairly evenly dispersed across the landscape. The Minoan palaces are next in age, rising into prominence in the eastern Mediterranean from 1900 to 1000 B.C., and functionally/stylistically different from the Maltese monuments. Crete was slightly less insular than Malta/Gozo, and had easy and ready access to neighboring landforms (II = 28, 70 km to nearest isle, 100 km to nearest island group, and 100 km to the nearest continent). At 7,475 m^2, the average monumental structure on Crete dwarfs those of other islands, although the total of monumental construction was small, and the monument density is 167 times lower than any other island test case (0.0006 monuments/km). The Talayotic period of Minorca stretched from 1700 to 123 B.C., and served as community houses for defense, storage, and sacrifice. Similar to the other Mediterranean isles, Minorca also had easy access to neighboring landforms (II = 35, 40 km to nearest isle, 200 km to nearest island group, and 200 km to the nearest continent). The average *talayot* tower on Minorca was relatively small. There was a moderately small total area of monumental construction, and monuments were relatively dispersed across the landscape.

In the Pacific, the Pohnepian *lulung* of Micronesia was the earliest monuments, utilized between A.D. 1000 and 1500. Most were conglomerated into the city of Nan Madol, but other smaller centers exist as well. Pohnpei was highly insular (II = 108, 20 km to nearest isle, 1,350 km to nearest island group, and 4,500 km to the nearest continent) compared to any of the Mediterranean examples. The average monumental structure on Pohnpei was moderate in size and had a large total area of monumental construction.

The *heiau* temples of Maui, utilized between A.D. 1200 and 1800, were dispersed fairly evenly across the island landscape, yet clusters of temples were located at political centers. Maui was extremely insular (II = 60 km to nearest isle, 2,000 km to nearest island group, and 4,018 km to the nearest continent). The average monumental structure on Maui was moderate in size, and the island had the largest area of monumental construction (n = 250; 23.1 ha). The *abu* temples of Rapa Nui dominated the landscape of this remote Pacific island from A.D. 1100 to 1500, the most isolated island on earth (II = 149, 2,001 km to nearest isle, 2,001 km to nearest island group, and 3,568 km to the nearest continent). The average monumental structure on Rapa Nui was moderate in size, resulting in a large quantity of monumental construction. The *abu* temples were highly dispersed across the island landscape, and had highest density among the test cases (1.9 monuments/ha), almost five times greater than any other island monument.

The data in Table 7.1 appear to be interconnected in two ways. First, island isolation positively correlates with monumental elaboration in the form of the total space available for monumental construction. Second, the density of monuments per km^2 is relatively constant except where island size is very small and very large. Although local processes of social and ritual elaboration for each of the four test cases were undoubtedly important, I argue that two interrelated variables – productive circumscription and social competition – influenced the rise and use of monumental trajectories on islands.

Productive Circumscription. Islands, more so than most other environments, are highly susceptible to geographic circumscription. Circumscription (Carneiro 1970) occurs when social distress peaks as increasing populations become stymied because no new suitable locations are available for economic expansion. This leads to either increased conflict or hierarchical formations that regulate existing resources. Productive circumscription is a product of how concentrated or controllable resources are in any given environment (Earle 1991:10–11), and thus predicts social complexity, especially for early agrarian societies that focus on staple production. Among the test cases, a correlation seems to exist between island isolation index and the total area of monumental construction (see Table 7.1). Rapa Nui, Maui, and Pohnpei have isolation indices that are at least three times greater than any of the Mediterranean islands. Moreover, the Pacific islands also possess a total monumental area that is at least double that of any Mediterranean islands, which measures available space utilized for collective social activities.

Isolation, of course, may represent a proxy measure of environmental circumscription and therefore agro-economic potential. Archaeological evidence indicates that farmers and foragers traveled back and forth from the Mediterranean islands for millennia (see Barker 2004), and therefore could have easily provided an economic and social buffer for those who resided on either island. Crete, given its size and carrying capacity, was self-sustainable throughout antiquity. Malta and Menorca, although perhaps less sustainable in the long term, were no more than 250 km from large landforms. The Pacific islands were probably just as self-sustainable as Malta, particularly Maui, but did not have comparably proximal productive buffers, and so would have more quickly reached maximum carrying capacity and sustainability. The archaeological record is quite clear that Pohnpei was involved in some long-distance trade (probably nonsubsistence goods); the Pacific trade networks were highly sophisticated and regularly spanned thousands of kilometers (see Irwin 1992; Kirch 2000). Rapa Nui, the most isolated place in the world, may have had at least some degree of intermittent contact and exchange with the outside world for a brief period, but not enough to provide an adequate productive buffer.

Social Competition. Social competition is also important to monumental elaboration. Certainly one of the most perplexing facets of island monumentality is the fact that the caloric and economic investments required for monumental construction seem counterproductive in such circumscribed environments. Rapa Nui and its 25 percent increase in food production/caloric intake for monumental construction is a case in point. Obviously, monuments become an important form of currency for social conflict or competition that results in channeling and controlling a set of limited productive resources.

One way to examine the relationship between monumental elaboration and conflict or competition is through the continuum of corporate and exclusionary strategies of social organization (see Feinman, Chapter 3). Corporate strategies are political relations that emphasize collective unity rather than personal aggrandizement, suppressing economic differentiation and deemphasizing personal wealth (Blanton 1998; Blanton et al. 1996; Feinman 1995; Feinman et al. 2000). Corporate organization is linked with local economic production, shared political power, and architecture emphasizing cooperative religious rituals, food production, and boundary maintenance (see Kolb 1997). Exclusionary or networked organization is linked with long-distance economic networks, more centralized/individualized rule, higher degrees of social inequity, and architecture expressing

exclusionary elite aggrandizement (such as the palaces and tombs of ancient Egypt).

The dispersed nature, horizontal differentiation, and centrality of the monumental landscape are important measures for assessing the nature of social competition. Interestingly, monument density/dispersal (per km^2) is relatively constant except for the smallest (Rapa Nui) and largest (Crete) islands (see Table 7.1). Rapa Nui has a density at least five times greater than all other islands, and more than a thousand times more than Crete, yet the island is only 1/50th the size of Crete. But Crete has a monument density at least a hundred times less than other islands. This suggests that corporate competition, as measured by monumental dispersal, intensifies on islands that are more environmentally or social circumscribed. A dispersed monumental landscape suggests greater island-wide political participation (and therefore competition), as well as less-centralized control over productive resources. Viewing island monuments as territorial markers (Kolb 1994; Renfrew 1976), or as levers for negotiating religious or ideological activities in exchange for food or economic resources (Rainbird 2007; Stoddart et al. 1993), are two arguments that may explain this type of monumental functionality.

The Rapanuian, Menorcan, and Maltese monuments are good examples of the use of corporate social power. All have small monuments equally distributed across the landscape. They hosted important group-oriented rituals that allowed various social groups to exercise political, spiritual, and economic control. As these monuments became more architecturally complex over time, they served as markers for expressing territorial conflagrations and social dissent between social groups. It is unclear whether power became centralized under one or more elites/social groups over time, but it appears that social friction was on the rise. The eventual shift to cremation burials at both the Maltese temples and the Rapanuian *ahu* platforms indicate a subsequent breakdown of corporate power; on Malta, rule became more authoritative to access external metal exchange and maintain elite power (see Stoddart et al. 1993), and on Rapa Nui, social cohesion collapsed from environmental degradation and civil strife (see Diamond 2005:108).

The Mauian *heiau* temples reveal a mixed pattern of corporate and exclusionary social competition. Their initial use was associated with corporate group competition, coinciding with distinct periods of political tension when it was important to encourage and control social allegiances. It was at this time that some of the largest temples were built. After island unification, temple numbers increased and their size stabilized. Their function shifted

to maintaining territorial control and social consensus within a broader exclusionary network of elite centralization.

The Minoan palaces represent the most drastic departure from the corporate strategy of social competition. On Crete, long-distance trade of prestige goods fostered more exclusionary social control, where palaces with their magnificent frescos served as centralizing nodes of organizational development, enhancing the social and ideological stature of local elites. Undoubtedly the rapid changes experienced in the east Mediterranean during the second millennium (e.g., increasing population, more intensive farming, Near Eastern contact, rise of metallurgy) stressed more exclusionary forms of ritual practice and leadership by enhancing social distinctions among individuals. On the other hand, a diverse set of palatial functions seem to indicate the expression of corporate relationships control, even if it were a vestige of the past. These include the public spaces and processional ways, the decentralized use of apartment spaces, and the lack of elite spaces.

The Pohnpeian *lulung* burials/platform structures represent the most fascinating test case, demonstrating an interesting amalgam of corporate and exclusionary monumental elaboration. In one sense, they represent clear indicators of corporate expression: single structures commissioned and built by individual families with the clan support. Their function as residential platforms and burial mounds also denote horizontal differentiation of social control and competition. However, placement of many large *lulung* platforms at the centralizing node of Nan Madol is indicative of exclusionary social competition with a centralized decision-making process. The lack of any larger defining monument at Nan Madol suggests the nature of social competition was still staple-based, not fully exclusionary, and may have been in social transition. The location as a coastal site may have been an attempt to generate long-distance trade networks. But given Nan Madol's isolation, minimal inter-island social network, and lack of any really unique trade goods that enhanced elite control, its centralized society based eventually collapsed.

Conclusions

The goal of this chapter has been to examine the genesis and elaboration of some of the world's most interesting and impressive island monuments through comparative analysis. Although substantial differences exist in the construction, chronology, and location of these monuments, two key similarities exist. First, the nature of monumental construction is intrinsically

linked to island isolation and social circumscription. A certain threshold of isolation seems to stimulate a divergence in the way monuments are constructed and utilized. Second, those who built and used these monuments made logical choices for undertaking social competition and negotiating social consensus. As social inequality and economic intensification increased over time, island communities struggled with ways to maintain their collective unity in the face of emerging elites. These monuments represent a variety of expressions for economically and ideologically enhancing long-term authority. In those cases where political and territorial cohesion could be maintained (such as on Maui and Crete), very tangible economic benefits emerged for elites. The pattern of monumental use in island societies has significance for the development of complex societies throughout the world, where the processes of political formation and ritualized ideology can be interwoven with architectonic and economic questions in discussions of historical or archaeological change.

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POWER AND LEGITIMATION

POLITICAL STRATEGIES, TYPOLOGY, AND CULTURAL EVOLUTION

Peter Peregrine

Tell Mardikh lies on an arid plain to the east of Hamas, Syria. It is not an unlikely place for an ancient city, nor is it a particularly obvious one. It is surrounded by tillable land, and is adjacent to the Orontes River valley. It is not a particularly impressive site. It has massive walls, the ruins of which can be seen for several miles, but they are no larger than those surrounding many tell sites in northern Syria. What makes Tell Mardikh special are the more than 15,000 clay tablets discovered *in situ* in what appears to have been a royal archive, tablets that offer a remarkable portrait of an ancient empire (Matthiae 1981). Without the archive of tablets, Tell Mardikh is one among several Early Bronze Age city-states in northern Syria, each controlling a modest hinterland of agricultural fields and pasturage (e.g., Wilkinson 1994). With the archive, Tell Mardikh becomes the center of control for an empire that stretched across much of what is today northern Syria and Iraq and southeastern Turkey (Pettinato 1991).

Tell Mardikh illustrates an assumption that underlies the rest of this chapter: The past is more complex than the archaeological record makes it appear. This assumption is, in my opinion, a fairly uncontroversial one, and is a logical extension of what we know about the archaeological record. However, it also problematizes much of traditional thought in archaeology, for example, Yoffee's Rule, which asserts that "if you can argue whether a society is a state or isn't, then it isn't" (Yoffee 2005:41).

Yoffee's Rule (and, by extension, much of traditional thought in archaeology) represents an inherently conservative approach to prehistory. It suggests that political complexity (the state) does not arise easily or commonly, and if the presence of a state cannot be demonstrated beyond any doubt, an archaeologist is forced to withhold statehood from the political entity. It also suggests (despite arguments to the contrary, e.g., Yoffee 2005:31) regularity and stability in political formations, that once a state arises, its