



# CHAPTER 6

## The Old Kingdom and First Intermediate Period

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## Introduction

With the successful consolidation of state control in the first two dynasties (and most likely an increasingly effective bureaucracy), the stage was set for the impressive royal projects of the 3<sup>rd</sup> and 4<sup>th</sup> Dynasties. Egypt's first pyramids represent state control over resources, both material and human, on a new and much larger scale than previously. The state was ruled by a king, whose earthly power and ideological role were symbolized by the stone pyramid, first as a stepped structure and later as a smooth-sided form. The Great Pyramid at Giza, the most impressive of these monuments, was the largest building in the world for over 45 centuries.

While most of the highest officials of the state were related to the king in the 4<sup>th</sup> Dynasty, the number of non-royal bureaucrats increased in the following dynasty. Officials built elaborate tombs near the capital and a new type of royal center also appeared in the Memphis region: the sun temple. At the same time royal pyramids were becoming increasingly smaller and less well constructed.

In the late Old Kingdom, during the 6<sup>th</sup> Dynasty, power of provincial leaders increased and the crown income declined. The Old Kingdom ended with the death of Pepy II, who possibly had a very long reign, followed by what is called the First Intermediate Period. Little is known about the short period of the 7<sup>th</sup> and 8<sup>th</sup> Dynasties, after which centralized control of the country broke down. During the 9<sup>th</sup> and 10<sup>th</sup> Dynasties a (local) dynasty which controlled parts of northern Egypt arose at Herakleopolis.

## 6.1 The Old Kingdom: Overview

Sometimes called the “Age of the Pyramids,” the Old Kingdom consists of the 3<sup>rd</sup> through 6<sup>th</sup> Dynasties. The two large pyramids at Giza (belonging to Khufu and his son Khafra) are enormously impressive monuments, representing the highly effective organization of the state: to engineer and design the monuments; plan and organize work programs of great complexity; marshal the goods and materials required; and feed, clothe, and house thousands of workmen. Such accomplishments, symbolized in the royal pyramid, represent the great capabilities of the Old Kingdom state, and are the most visible evidence of the ideological significance of the mortuary cult and the king’s role in it.

### Box 6-A Egyptian kingship: names/titles, symbols, crowns, and regalia

The concept of a dual monarchy and kingdom is seen from Early Dynastic times onward: the king was ruler of Upper and Lower Egypt. Perhaps the most prominent symbol of the dual monarchy is the Double Crown, consisting of the White Crown of Upper Egypt and the Red Crown of Lower Egypt, which the king is shown wearing together. Another important symbol of the two kingdoms is found on the king’s throne, where a stylized (lotus?) flower and papyrus stalk are bound together, such as carved on the famous statue of Khafra in the Cairo Museum. Although there is no evidence of two separate kingdoms of Upper and Lower Egypt in Predynastic times that would have been unified to form the Early Dynastic state, the ideology of a dual monarchy was fundamental to Egyptian kingship.

The earliest format in which the king’s name appeared is the *serekh* (see Figure 5.8), possibly the design of a niched palace gateway above which is the Horus falcon.

Within the *serekh* the individual king’s name is written in hieroglyphs, and the whole forms the Horus name. The Horus name is the first of five royal titles/names that were in use by the 5<sup>th</sup> Dynasty. The second title is the (He of the) Two Ladies, representing the king as manifesting, and under the protection of, the goddesses Nekhbet of Elkab and Hierakonpolis in Upper Egypt, and Wadjet of Buto in Lower Egypt. The third title is the Horus of Gold, with the Horus falcon above the hieroglyphic sign for gold. The last

king of the 3<sup>rd</sup> Dynasty, Huni, was the first ruler whose name regularly appeared in a cartouche, which is an oval design formed by a rope that is tied at the bottom. The cartouche was used for the king’s fourth (throne) title/name, and fifth (birth) title/name. The throne title (which came before the birth name in the 1<sup>st</sup> Dynasty) is often translated as “He of the Sedge and Bee,” with the sedge plant(?) symbolic of Upper Egypt and the bee symbolic of Lower Egypt. The throne name, often referred to by Egyptologists as the “prenomen,” was assumed at accession. The fifth title (which came before the throne name in the 4<sup>th</sup> Dynasty, but by the Middle Kingdom was written along with the king’s birth name) is Son of Ra. The name given to the king at birth, called the “nomen,” is the one that is usually used by historians in king lists.

Aside from the White and Red Crowns, other crowns/headdresses were reserved for the king, as symbols of his position and authority. The *nemes* headdress, such as Khafra wears in his seated statue, was made of cloth, tied in back with lappets hanging down on the shoulders. From the Middle Kingdom onward the *nemes* headdress was the most important item of royal regalia. In the New Kingdom, when Egypt controlled an empire abroad, kings are often depicted in battle and otherwise wearing the Blue Crown, a kind of high cap decorated with circle designs.

Other symbols of royal authority include the *was* scepter, with a curved prong at the bottom, which in reliefs was held by the king and deities. Two other royal

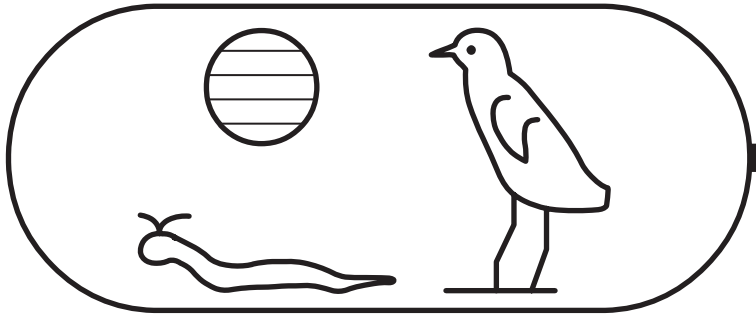


Figure 6.1 Cartouche of Khufu

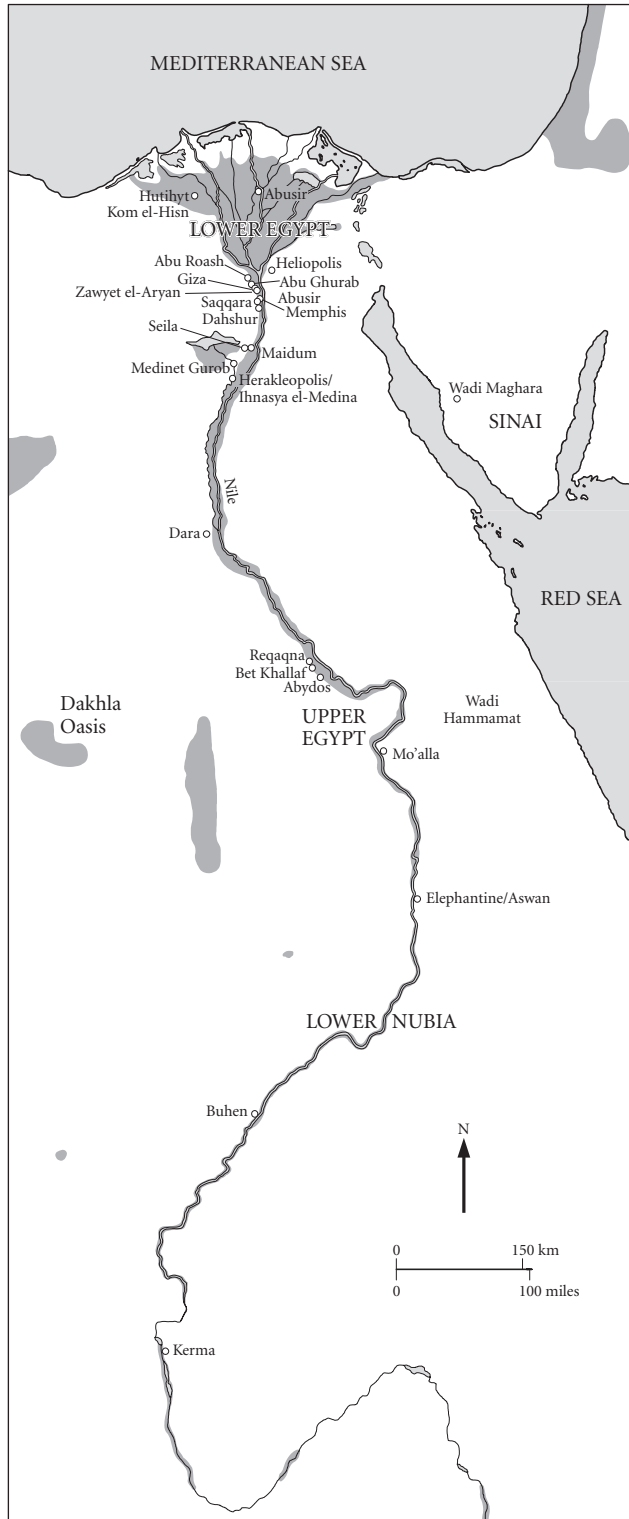
scepters, the shepherd's crook (*heqa*) and flail, are perhaps most famously seen on the three coffins of Tutankhamen. Also on these coffins the king wears the *nemes* headdress with symbols of the Two Ladies centered above his forehead (the vulture of the goddess Nekhbet and the cobra of the goddess Wadjet). On

some statues of Tutankhamen, such as the two which guarded the entrance to the burial chamber, the king wears the *nemes* headdress with a single cobra, the uraeus, above his forehead. The uraeus was symbolic of the power of the eye of the sun god Ra.

Central to the political organization of the Old Kingdom was the institution of kingship (see Box 6-A). The state was probably run by royal decree, which guided bureaucrats in government operations. Palaces have not been recovered by archaeology, and the pyramid complex is the most striking form of royal monumental architecture in the Old Kingdom. From the 4<sup>th</sup> Dynasty onward, the royal mortuary complex consisted not only of the walled pyramid-tomb, but also subsidiary pyramids and a complex of temples connected by a causeway.

Monumental evidence of the role of the king is supported by textual evidence. The king was believed to be the son of the sun-god Ra, the most important state deity in the Old Kingdom. Beginning with Radjedef (who succeeded Khufu), "son of Ra" appears in royal titles, and in the 5<sup>th</sup> Dynasty kings built sun temple complexes in addition to their pyramid complexes. In the later Pyramid Texts the dead king becomes Osiris, the father of Horus the living king, and in his rebirth he is Ra in a cosmic afterlife.

Kingship was also legitimized by the all-encompassing ethical concept of *ma'at*, which was sometimes personified as a goddess. It was the king's duty to guarantee *ma'at* – an earthly order, which included the annual flooding of the Nile and the agricultural cycle, and the cosmic order of the gods, in which the king was the sole intermediary for his subjects. Often translated as "truth" or "justice," *ma'at* is known from the 2<sup>nd</sup>/3<sup>rd</sup> Dynasties onward. Beginning in the 4<sup>th</sup> Dynasty it is found in royal names and epithets, and became



Map 6.1 Sites in Egypt, Nubia, and the Sinai during the Old Kingdom and First Intermediate Period

associated with the role of the king and royal ideology. *Ma'at* also justified the ideology of an unchanging social order that was highly stratified, which is clearly demonstrated in the tombs and titles of the Old Kingdom.

The Old Kingdom state was a long-lived one, with no fundamental disruptions for more than 500 years, and faced no serious external threats. Most of the population were peasant farmers living in rural communities. With the materials that sustained life available locally, farmers were basically self-sufficient, but they also probably bartered handicrafts and foodstuffs in local markets. How extensive a system of local markets and non-elite craft production was cannot be determined, but many tomb goods in provincial cemeteries were probably produced locally – and local exchange may have been considerable.

Except for the capital of Memphis, Old Kingdom Egypt was not a state with large urban centers. Memphis was the seat of the royal court and central government, headed by a vizier with executive, fiscal, and judicial duties. It is unlikely that Memphis was a densely populated, walled city as in contemporaneous Sumer, but its spatial organization is unknown. In the low desert beyond the floodplain and city were the cemeteries, for government officials and the king, who may have had a residence near the construction site of his pyramid.

Throughout the country were provincial administrative centers. These were not large urban communities, but were occupied mainly by officials, lower ranking administrative personnel, and probably some craftsmen. Many administrative centers arose in Early Dynastic times, with the system becoming increasingly organized for state affairs in the early Old Kingdom, as large-scale royal work projects (i.e., pyramid complexes) required more and more resources in the Memphis area. In the later Old Kingdom, provinces were governed by increasingly powerful heads. Local cult centers in the provinces, mainly constructed in mud-brick with some stone elements, such as columns, were relatively small and insignificant compared to the temples associated with royal pyramids in the Memphis area. Typical of such a provincial center may be the Old Kingdom town of Nekhen (Hierakonpolis). It was a walled town, ca. 200 meters × 300 meters in area (6 ha), within which were mud-brick buildings, and a walled temple enclosure.

Workers were not slaves, but were conscripted for state projects, as one kind of payment of taxes to the state (corvée labor). A large work force to construct the Giza pyramids would have required a large town to house them. But Mark Lehner's excavations at Giza suggest a more complex arrangement, with up to 2,000 laborers sleeping in long narrow "dormitories" to the southeast of the pyramid construction site. They were fed bread produced in nearby bakeries and probably worked in short rotations, while their foremen lived in proper house structures. A larger town, possibly for a permanent work force, was located to the east.

A major segment of the Old Kingdom economy was state controlled, through land ownership (which could also be revoked), taxation, redistribution, and organization of long-distance trade and mining/quarrying. Three types of land ownership are known: land owned directly by the crown, land owned by cults (mortuary cults of kings and individuals, and the cults of deities), and land owned by private individuals (the produce of which was taxed). In the Early Dynastic Period and early Old Kingdom the

crown established its control of much of the land in Egypt by founding agricultural and cattle estates, such as those listed for one year of Sneferu's reign (4<sup>th</sup> Dynasty) in the Palermo Stone. This may have been some type of internal colonization, but how it was actually accomplished is not known, given that much land was probably already owned by individuals or controlled by collective groups. But there was probably also uncultivated land available for reclamation by the crown.

In the Old Kingdom the largest mortuary cults were for the royal pyramid temples, where the king's statues were daily purified, dressed, and given various offerings and libations by living persons. The daily temple ritual had to be performed and much incense was burned. Special feast days were also celebrated. There is evidence of communities whose sole purpose was the perpetual service and operation of the cult. The various personnel of mortuary cults were supported by donations of agricultural land, many of which were tax exempt, on which commodities were produced. At least 38 estates in both Upper and Lower Egypt are known from reliefs in the Dahshur valley temple of Sneferu's Bent Pyramid, built at the beginning of the 4<sup>th</sup> Dynasty. Commodities from the estates owned by a royal mortuary cult could also be shared in a complex division – with the palace, cult temple(s), and a number of private mortuary cults, as a papyrus from the pyramid temple of Neferirkara (5<sup>th</sup> Dynasty) documents. Some temple personnel were full-time, including an overseer, some priests (who performed purification ceremonies and read the daily ritual), as well as scribes, artisans, and servants/workmen in the pyramid town. Many priests served part-time on a rotating basis, a system which went back at least to the beginning of the Dynastic period and by the late Old Kingdom had become fairly complex. These priests would serve typically for one in ten months, so rations of commodities from cults' estates were redistributed to a large number of people.

Food (bread, beer, cereal, and sometimes meat) and cloth were redistributed to officials and workers of the state, but beyond this was a system of royal reward, an important part of the economy that also sustained loyalty to the crown. The king not only gave land to private individuals (which was frequently used to support their mortuary cults), but officials were also rewarded with beautiful craft goods, such as jewelry and furniture, produced by highly skilled artisans working for the court. Such luxury goods depended on long-distance trade with southwest Asia and Punt, and mining and quarrying expeditions in the Sinai and Eastern Desert, which were controlled by the state. Exotic raw materials (gold, turquoise, elephant ivory, ebony, cedar for coffins, etc.) were obtained on these expeditions, the scale of which depended on state (and not private) organization and logistics. Thus officials not only depended on the state for their subsistence, but also for much of their material wealth in highly desired luxury craft goods.

While many such craft goods would have been enjoyed in life, some were also placed in tombs – and went out of circulation in the economy. Although the massive burial of grave goods in the Early Dynastic Period does not seem to have characterized burials in the Old Kingdom (as known from the few found intact), funeral ceremonies may have resulted in much destruction of wealth. Thus funeral and tomb provisioning was directly connected to the state economy, including long-distance trade and

mining/quarrying expeditions, and crafts produced from the imported materials. In the 4<sup>th</sup> Dynasty, there is evidence of state workshops for craft goods near the Giza pyramids (for stone carving and copper production, but also pottery kilns), but these goods may have been produced mainly for royal consumption and use by pyramid workers.

The non-royal mortuary cult was also connected to the state ideologically, in beliefs concerning the king. Inscriptions of the “offering formula” (*hetep di nesu*) in private tombs begin with the clause “an offering which the king gives to Osiris . . . of bread, beer, clothing, stone vessels, meat and fowl, and all good things . . .” Thus beliefs of individuals concerning death and providing for the afterlife were associated with the king (and gifts recycled from the gods), and the tomb itself could also be a royal gift. An earthly and cosmic order in which the king was central (especially concerning the afterlife of all of his subjects) legitimized his socio-political role in Egypt – and consequently his economic control over vast resources.

## The Early Old Kingdom

### 6.2 The 3<sup>rd</sup> Dynasty: Djoser’s Step Pyramid at Saqqara

Günter Dreyer has found Djoser’s sealings at Khasekhemwy’s Abydos tomb, which suggests that Djoser succeeded the last king of the 2<sup>nd</sup> Dynasty and finished his tomb. There is also a similarity in plan between Khasekhemwy’s Abydos funerary enclosure in mud-brick and the initial design of Djoser’s Step Pyramid complex in stone (see 5.6 and Plate 6.1).

From Djoser’s reign onward, kings of the Old Kingdom were buried in the north, and with his pyramid complex royal mortuary architecture takes a more monumental form, representing a new level of royal control of the state. This was the earliest large monument built in stone, an architectural feat much more labor intensive than the mud-brick construction of the earlier royal funerary enclosures and tombs. So impressive was this great monument that Djoser’s architect Imhotep (also the royal seal bearer and high priest of the cult of the sun god Ra) was later deified as the son of the god Ptah.

Exploration of the Step Pyramid complex began in the early 19<sup>th</sup> century, and in the 20<sup>th</sup> century its main excavator was Jean-Philippe Lauer, a French architect who also reconstructed key portions of the complex. Covering an area of over 15 hectares (545 m × 278 m), the rectangular complex is about 2.5 times as large as the Old Kingdom town of Hierakonpolis. Nighed limestone walls surrounded the complex, with only one entrance gateway near the southeastern corner, leading into a roofed passageway with 40 columns. The pyramid is not square but rectangular, and is not situated in the center of the complex. According to Lauer, it was built in six stages. It began as a rectangular, low flat structure termed a mastaba (meaning “bench” in Arabic), which was expanded twice. Only in its fourth stage was a four-stepped pyramid constructed.



During the last two building stages the pyramid was enlarged to six steps. Although the three mastabas had been built with rough stone cores covered by finer limestone casing stones, the later stepped structures were built with stone blocks in accretion layers that leaned inward. The final pyramid was 121 meters  $\times$  109 meters in area and 60 meters high.

The design of Djoser's complex is unlike the plan of later Old Kingdom pyramid complexes (see Figure 6.2). The pyramid temple is located on the north side of the pyramid, where the king's limestone statue (now in the Cairo Museum) was found in a small enclosed chamber termed the *serdab*. Two eye holes were cut for the statue through the *serdab*'s northern wall. At the north end of the pyramid complex is a very large courtyard, still not fully cleared of debris, with an altar near the northern wall. Underground galleries along this wall contained real food – granaries of wheat and barley, but also figs, grapes, and bread. An extensive system of underground galleries, mostly inaccessible, is also located to the west of the pyramid and southern court.

To the east of the pyramid are two “dummy” buildings, filled with solid rubble, the so-called Houses of the North and South (possibly symbolic of Upper and Lower Egypt). To the southeast of the pyramid are more dummy buildings facing onto the *sed*-festival court, designed with the façades of shrines for provincial deities. According to Lauer, the “dummy” buildings were partially buried soon after construction, for the king's use in his afterlife. Also partially buried was the so-called South Tomb at the southern end of the complex, with a small chapel along its northern wall. A stairway leads to a series of underground corridors and chambers, including a granite burial vault at the bottom of a large vertical shaft. This vault is too small for the king's burial and it was possibly used to bury his viscera, which would have been embalmed separately. One room in the South Tomb has three niches with finely carved reliefs of the king, including one showing Djoser running the *sed*-festival race (see Figure 6.3).

Beneath the pyramid are more corridors and chambers, and a burial vault of granite blocks at the bottom of a vertical shaft 28 meters deep. The huge granite plug which blocked the vault's ceiling weighed about 3.5 tons. There is also evidence of an earlier burial vault with travertine walls, and a limestone ceiling decorated with five-pointed stars. The original staircase to the underground rooms was covered over by the later pyramid, and a second descending passageway had to be cut to the north of the pyramid temple. Entered from 11 vertical shafts, some of the subterranean corridors lead to long narrow storerooms for an astonishing number of carved stone vessels (about 40,000!), many of which were made in the first two dynasties. Four galleries were also used for other burials – including an 18-year-old female whose hip bone was found. As in the South Tomb, there were three niches with reliefs of Djoser, and walls decorated with blue-glaze (*faïence*) tiles.

In the large South Court, between the South Tomb and the pyramid, are curved stone cairns, which have been called territorial markers and are believed to be associated with the *sed*-festival, an important ritual for Egyptian kings known from Dynasty 0/late Predynastic times. The *sed*-festival (*heb-sed*) is sometimes translated as “jubilee”: it was a ceremony to ritually renew the powers of the king. In later tradition the *sed*-festival was ideally conducted after a king had reigned for 30 years. Scenes of the *sed*-festival

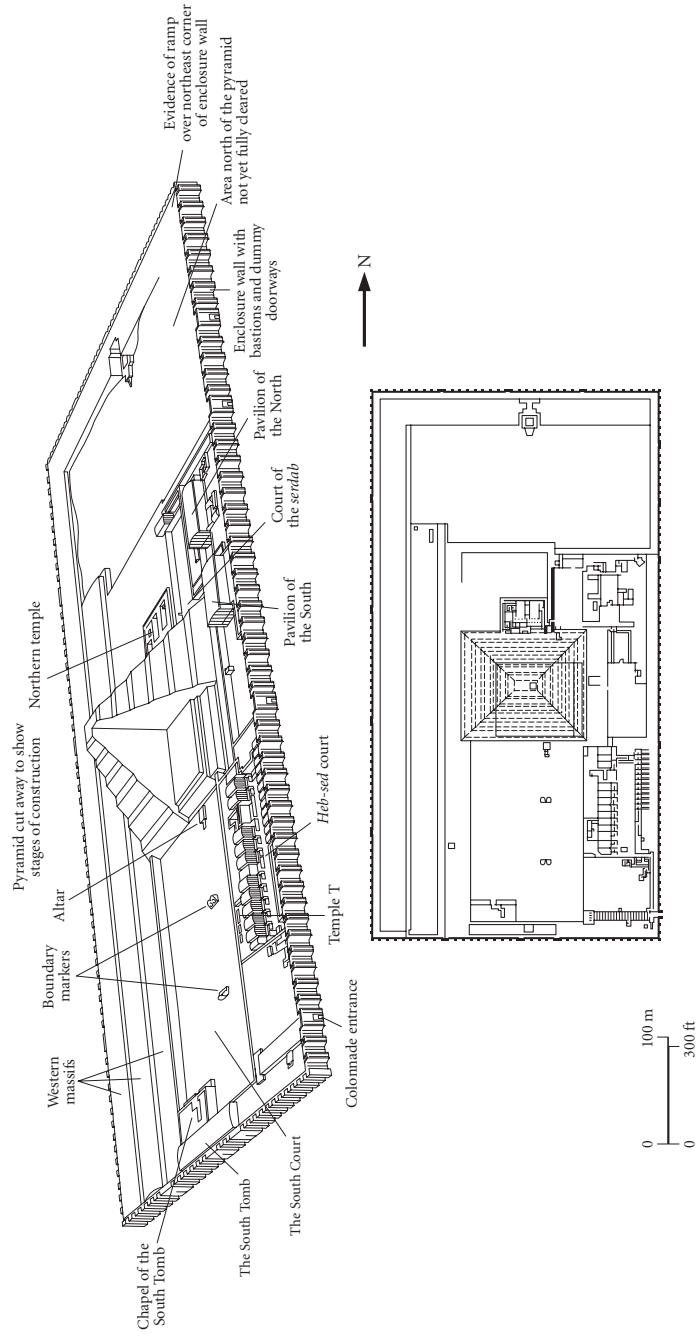


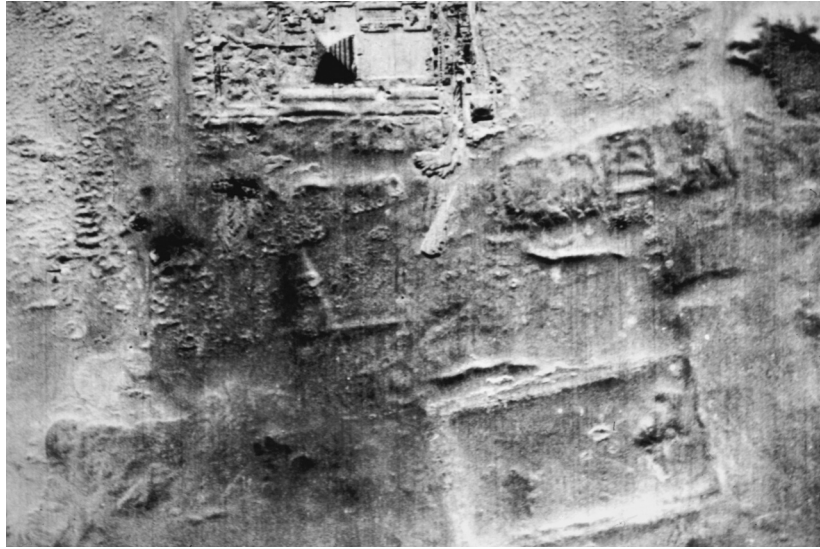
Figure 6.2 Djoser's Step Pyramid complex, Saqqara. Source: Mark Lehner, *The Complete Pyramids*. London: Thames and Hudson, 1997, p. 85



**Figure 6.3** Relief of Djoser running the *sed*-festival race, from the so-called “South Tomb” at his Step Pyramid complex, Saqqara. © Roger Wood/CORBIS

depict the king running between curved markers, and then seated on a double throne (symbolic of Upper and Lower Egypt) on a canopied dais and wearing a knee-length robe. The stone cairns in the Step Pyramid’s South Court were for the king’s *sed*-festival, symbolizing the king as the territorial claimant of all of Egypt. At the southern end of the complex’s *sed*-festival court is a real throne dais with two ramps (for a double throne?), also a constituent part of the festival. According to Barry Kemp, the whole Step Pyramid complex symbolizes, in an eternal form, the royal palace enclosure (in its most elaborate design) in which the king performed rituals associated with Egyptian kingship.

Many of the design elements carved in stone throughout the Step Pyramid complex mimic architecture in organic materials. The blue faïence tiles in the niches below the pyramid and South Tomb resemble painted matting attached to wooden frames of shrines with curved roofs. Shrines in the *sed*-festival court have been reconstructed as replicating portable tent shrines, with a curved roof and open front, sitting on top of a platform. Some of the columns on the shrine façades have capitals of fluted leaves. The Houses of the North and South are a variation of this type of shrine. Attached to their façades are fluted lotus(?) columns symbolic of southern Egypt and papyrus columns for northern Egypt. The flat roof and façade of Temple T to the west of the *sed*-festival court represents an enclosed tent shrine. Ceiling stones in this temple are carved to look like wooden beams, as are those in the entrance colonnade, which has columns that resemble bundles of reeds. The translation into stone of architecture in perishable



**Figure 6.4** Aerial photo of the Step Pyramid complex and three unfinished rectangular pyramid complexes at Saqqara, from old RAF aerial photographs taken in 1947. Courtesy of the Saqqara Geophysical Survey Project

materials is also symbolic of the eternal nature of this monument. It was the tomb and palace in which royal ritual was to be performed for eternity.

More royal monuments are known for the 3<sup>rd</sup> Dynasty, but they were never completed. To the southwest of Djoser's complex is the unfinished step pyramid complex of King Sekhemkhet, excavated by an Egyptian archaeologist, Zakaria Goneim, in the 1950s. This complex has a rectangular enclosure, but only the base of the pyramid was constructed. Also unfinished are galleries beneath the pyramid and a south tomb, in which the remains of a two-year-old child were found. An empty travertine sarcophagus was also found beneath the center of the pyramid. Some Egyptologists think that a large walled enclosure to the west of Sekhemkhet's complex, called the Gisir el-Mudir, was built by a king named Nebka, but no tomb has been found there. Another 3<sup>rd</sup>-Dynasty step pyramid (generally called the "Layer Pyramid"), also unfinished, is located to the north of Saqqara at Zawiyet el-Aryan. It probably belonged to King Khaba.

Although the 3<sup>rd</sup>-Dynasty kings who succeeded Djoser began to construct pyramid complexes, they were unable to complete them. According to the king lists, Djoser had a longer reign than either Sekhemkhet or Khaba, allowing the grandiose plan for his pyramid complex to be completed during his lifetime. But Djoser also seems to have had greater control of resources – both material and human – for the construction of his mortuary monument than the later kings of this dynasty. The history of the later 3<sup>rd</sup> Dynasty is not well known, it has been suggested that the unfinished royal monuments represent a weakening in the kingship following Djoser's reign.

The symbolism of the step pyramid form is unknown, but it may be associated with the concept of a royal/state monument. Seven small step pyramids, which are not tombs, were built in the provinces. Five of these are in Upper Egypt, including ones at Elephantine and Naqada. Stephan Seidlmayer has suggested that there may have been plans to build such monuments in each provincial center. Some of them may never have been built, while others may have been destroyed or lost over the millennia. The provincial step pyramids were probably monumental symbols of the crown – especially the royal mortuary cult – and the extraction of resources throughout the country for its support.

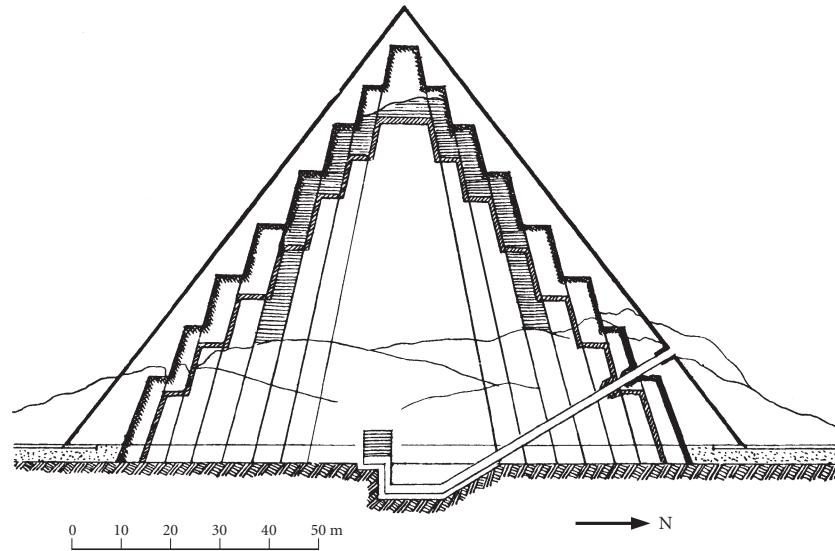
The form of the step pyramid, as a royal tomb or monument, did not survive the 3<sup>rd</sup> Dynasty. With the increased theological importance of the sun-god Ra in the subsequent dynasties of the Old Kingdom, the royal pyramid became a smooth-sided form, possibly symbolic of the rays of the sun. Culminating in Djoser's pyramid complex, the large walled funerary enclosure, which may have been symbolic of the royal palace and royal rituals there, also did not survive the 3<sup>rd</sup> Dynasty, as the pyramid complex became symbolic of the king's connection to Ra.

High officials of the 3<sup>rd</sup> Dynasty also built tombs at Saqqara, but these were mud-brick mastabas which had evolved from 2<sup>nd</sup>-Dynasty types. In the 1860s Auguste Mariette examined a number of these tombs, including those of Hesyra and Khabau-Soker. In niches in the western wall of Hesyra's mastaba, which was 39.0 meters × 17.4 meters, were finely carved wooden panels of the official shown with his writing equipment, with his titles carved in hieroglyphs. The tomb beneath the mastaba consisted of three levels of chambers and galleries, connected by vertical shafts.

Not all of the large private tombs of the 3<sup>rd</sup> Dynasty were built in the Memphis region, however. In 1900–1 John Garstang excavated several 3<sup>rd</sup>-Dynasty mastaba tombs at Bet Khallaf, to the northwest of Abydos. The largest of these mastabas (K 1) was truly enormous (85.5 m × 46.2 m, and 8 m high in 1900). Sealings of Djoser were found in this tomb, which contained an elaborate complex of subterranean chambers and galleries entered by a series of stairways and a ramp. Although the last royal burial at Abydos was that of Khasekhemwy (end of the 2<sup>nd</sup> Dynasty; see 5.6), some very high status persons were still being buried in the Abydos region (at Bet Khallaf and Reqaqna) in the 3<sup>rd</sup> Dynasty.

### 6.3 The 4<sup>th</sup> Dynasty's First King, Sneferu, and his Three Pyramids

With the 4<sup>th</sup> Dynasty comes an unprecedented scale of royal construction. Sneferu, the first king of this dynasty, built not one but three large pyramids, and probably the small step pyramid at Seila in the Faiyum region. These pyramids demonstrate the architectural evolution of the true pyramid design, culminating in the construction of the Great Pyramid at Giza by Sneferu's son Khufu. Altogether, Sneferu's three pyramids equal a mass of stone greater than that of the Great Pyramid.



**Figure 6.5** Cross-section plan of Sneferu's Maidum pyramid. Source: Ahmed Fakhry, *The Pyramids*. Chicago: University of Chicago Press, 1961 (2<sup>nd</sup> edn. 1974), p. 69. Reprinted by permission of the publisher, the University of Chicago Press

Sneferu's first pyramid, which some scholars have dated to the late 3<sup>rd</sup> Dynasty, was built at Maidum (to the east of the small Seila pyramid), possibly where the court was located at the time. The pyramid began as a stepped structure with seven steps, but was enlarged to make eight steps (see Figure 6.5). Like Djoser's Step Pyramid, the Maidum pyramid was built in accretion layers leaning inward to the center of the pyramid. The outer layer of each accretion was faced with high-quality limestone from the quarry at Tura, on the east bank of the Nile. According to German archaeologist Rainer Stadelmann, this monument was completed as a true pyramid late in Sneferu's reign.

Today only an inner stepped structure is visible with a huge amount of collapsed stone and rubble around the base of the Maidum pyramid. Many of the outer stones were used as a source of quarried stone in post-pharaonic times, which eventually caused much of the remaining outer structure to collapse. But there is no evidence that the pyramid suddenly collapsed as it was being constructed, as was suggested by Kurt Mendelssohn.

The pyramid's interior is relatively simple, with a descending passageway from the north face into a series of chambers carved into the bedrock. A vertical shaft leads to the burial chamber, built into the lower body of the pyramid. The ceiling of this chamber shows a new design: it is corbelled, with successively higher courses of stone projecting inward until the ceiling is closed. No sarcophagus was found there.

Sneferu's Maidum pyramid has most of the constituent elements of later pyramid complexes. The entrance into the pyramid is via a descending passage from the north. The pyramid was walled, with a small subsidiary pyramid on its south side, traces of which were found by Flinders Petrie, who excavated there in the late 19<sup>th</sup> century. On



the east side is a small chapel, and a causeway, cut into the bedrock with mud-brick paving and walls. The causeway leads down to the valley, where only a long mud-brick wall (and not a valley temple) was found. Although the original step pyramid was later renovated into a true four-sided one, probably as a kind of royal cenotaph but not the king's actual tomb, the entire complex seems to have been left unfinished, including the two uninscribed stelae in the eastern chapel.

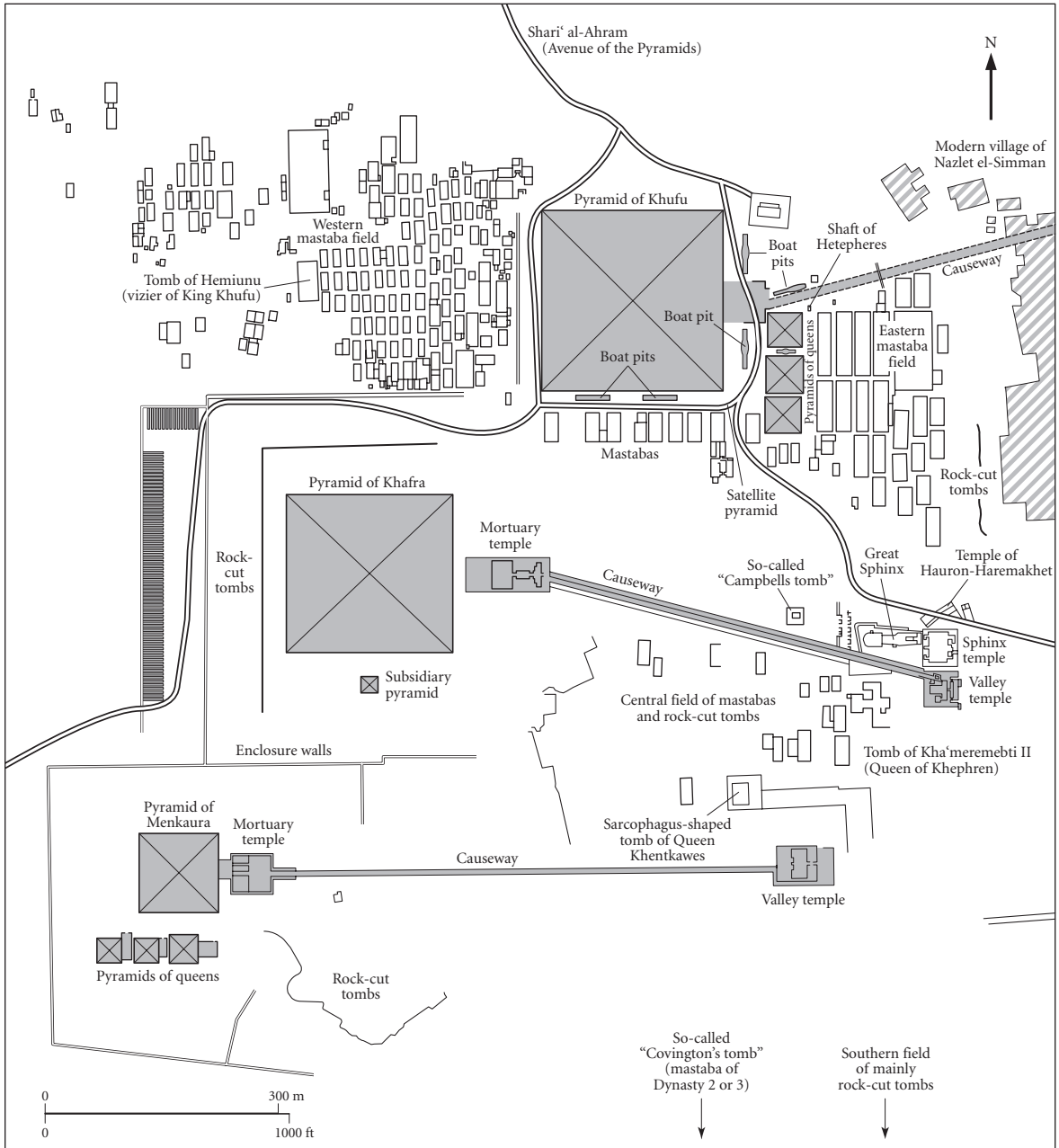
To the north of Sneferu's Maidum pyramid are some of the largest known mastaba tombs, which were built for high officials, including Nerferma'at, one of the king's sons, and his wife Itet. Several large mastabas to the west of the pyramid were left unfinished when the court cemetery was relocated to the north at Dahshur, where Sneferu built his other two pyramids. The chapel of Neferma'at's tomb is decorated with innovative wall scenes, with figures carved into the limestone walls and filled with colored paste. Scenes of food provisioning in Itet's chapel include the beautifully painted vignette of Egyptian geese, with intricate details of their feathers, now in the Cairo Museum. In another mastaba Auguste Mariette found seated statues of Rahotep and Nefert that were exceptionally well preserved (see Plate 6.2). With inlaid eyes, these two painted statues of plastered limestone appeared very lifelike to their discoverers. The high quality of sculpture and tomb painting in these Maidum mastabas represents the achievements of court artists working at an artistic level of great refinement.

About the middle of his reign Sneferu abandoned his Maidum pyramid for unknown reasons and began constructing two pyramids farther north at Dahshur. They are known as the North (Red) Pyramid and the so-called Bent Pyramid to the south.

In profile, the Bent Pyramid is truly that: its lower courses have a 55° angle of incline, whereas the upper courses have an incline of only 43°–44°. Although less steep than the incline of the steps of step pyramids, interior accretion layers in the Bent Pyramid's lower part sloped inward at an even steeper angle of 60°, creating an unstable structure which had to be modified. Construction of the upper part of the pyramid was changed to courses of stone blocks laid horizontally. Thus in this pyramid the transition from a stepped form to the four-sided pyramid is seen as the royal architects experimented with a new form and began to understand the stresses involved with such a construction.

Although two corbel-vaulted burial chambers were built inside the Bent Pyramid, with passageways to the west and north sides of the pyramid and a system of portcullis blocks to foil robbers, it was not intended for the king's tomb – possibly because of the problems that developed during its construction. Like the Maidum pyramid, the Bent Pyramid was also a cenotaph, with only a small shrine on its east side. But the Bent Pyramid's small valley temple, the earliest one known, contained statues of the king, and on walls of the courtyard there are reliefs of the king's agricultural estates throughout Egypt, personified as female offering bearers. This is where the king's cult seems to have been practiced after his burial elsewhere – in the pyramid to the north.

With lessons learned from the two earlier pyramids, Sneferu's North Pyramid at Dahshur was built much more solidly as a true pyramid. Constructed in the body of the pyramid are two corbelled antechambers connected to the passageway to the burial



**Map 6.2** Plan of the three Giza pyramid complexes and nearby tombs. From J. Baines and J. Malek, *Cultural Atlas of Ancient Egypt*. Oxford: Andromeda, 2000. Reproduced by permission of the publisher



chamber, also with a corbelled roof 15 meters high. A mortuary temple is on the east side, but according to Rainer Stadelmann, the site's excavator, this temple was never finished. Traces of a causeway and a valley temple are now completely gone.

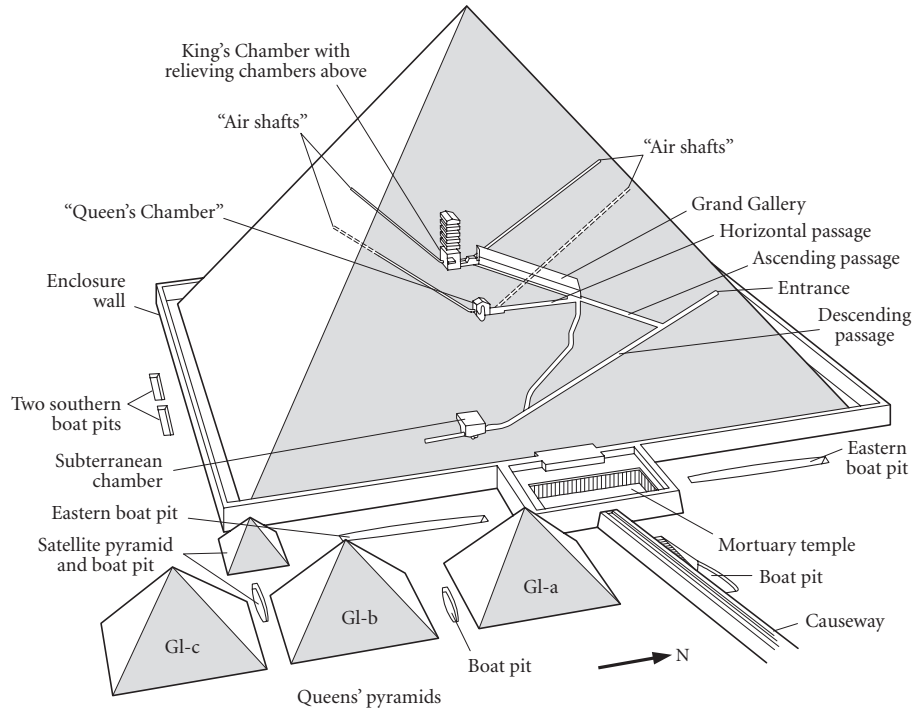
## 6.4 Khufu's Great Pyramid at Giza

Khufu, who was a son of Sneferu, built the first pyramid at Giza. Although there are Early Dynastic tombs at Giza, it was a new location for the royal cemetery – considerably north of Saqqara. Perhaps the Giza plateau was chosen because its limestone bedrock (called the Muqattam Formation) provided a solid base for the construction of such a huge monument. Khufu's pyramid complex contained the by then standard elements: a valley temple (unexcavated and probably mostly destroyed because it lies under a modern village), covered causeway, and mortuary temple on the pyramid's east side. Much of the mortuary temple is destroyed, but it originally had a courtyard paved in black basalt, some of which is still there, and columns of red granite. Three subsidiary pyramids belonging to queens are southeast of the mortuary temple, and another small pyramid, perhaps for the king's *ka*, was discovered by Zahi Hawass outside the southeast corner of the pyramid's enclosure wall. Four boat pits lie along the eastern and southern enclosure wall and a fifth one is to the north of the causeway. Two small boat pits are also located between the three queens' pyramids.

The pyramid itself is one of the most impressive structures of the ancient world. It is even more impressive when its statistics are given. Zahi Hawass estimates that the Great Pyramid originally contained about 1,300,000 blocks of stone. In weight these blocks averaged about 2.5 tons, although some blocks, such as the base stones, weighed much more. During construction the limestone blocks were laid in horizontal courses, with packing blocks and gypsum mortar placed in between the fairly irregular core blocks. When completed, the pyramid was covered with casing stones of fine Tura limestone, now mostly gone, with an outer angle of incline slightly less than 52°.

The base of the pyramid covers an area of 5.3 hectares. The great accuracy of the surveying required for the pyramid's construction has been confirmed by the Giza Plateau Mapping Project, under the direction of Mark Lehner. The pyramid's sides are aligned to the cardinal points, with only a slight deviation on each side (3'6" of arc). Each side is 230.3 meters long, with a deviation in accuracy of only 4.4 centimeters, and its original height was 146.7 meters. The level of the base on each side deviates by only 2.1 centimeters.

The interior of Khufu's pyramid is more complex than any other Egyptian pyramid (see Figure 6.6). Reached by a descending passage from the north side of the pyramid, the original burial chamber was carved in the bedrock beneath the pyramid, but was never completed. An ascending passage leads to a horizontal passage, at the end of which is the so-called Queen's Chamber, and to the Grand Gallery. Built in the body of the pyramid, the Queen's Chamber may have been planned for the king's burial after the subterranean tomb was abandoned. With a corbelled roof 8.74 meters high, the



**Figure 6.6** Plan of Khufu's Great Pyramid at Giza. Source: Mark Lehner, *The Complete Pyramids*. London: Thames and Hudson, 1997, p. 108

magnificent Grand Gallery ascends close to 50 meters up into the pyramid. At the top of the Grand Gallery and leading to the king's burial chamber is a short passage designed with three portcullis blocks to seal off the tomb. Another, almost vertical passage leads from the bottom of the Grand Gallery down to the subterranean descending passage. The vertical passage may have been used as the escape route for pyramid workers who sealed the tomb and passages after the king's burial.

Khufu's burial chamber is lined with huge blocks of red granite from Aswan. A granite sarcophagus is all that remains of what must have been an elaborate burial. Nine granite roof slabs estimated to weigh 25–40 tons each cover the ceiling, spanning the width of the chamber – 5.2 meters. Above the burial chamber are five stress-relieving chambers, air spaces with more granite roof slabs designed to check any possible collapse of the weight of the pyramid so that the burial chamber would remain intact. These chambers were first recorded in 1837 by Richard William Howard Vyse (1784–1853), an English army officer, who used dynamite to reach them. (He also blasted his way into Khafra's pyramid, and blasted off part of the back of the Great Sphinx.) Hieroglyphic graffiti of the names of the workgangs, which include the king's cartouche, are still visible in the top relieving chamber.

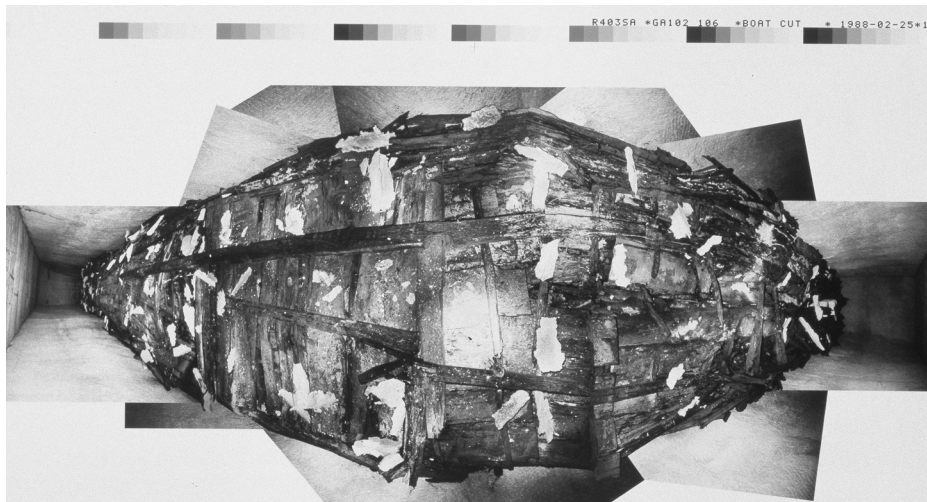
Unique so-called "air shafts" extend outward from both the Queen's Chamber and the burial chamber, and may have been symbolic routes for the king's spirit to travel

outward. German archaeologists sent a robot probe up one of the shafts of the Queen's Chamber (only 20 cm wide and 20 cm high). About 65 meters up the shaft the probe was stopped by a limestone plug with two copper pins attached to it. When a hole was later drilled through this plug a second plug blocked further exploration. Since this shaft was blocked, it (and probably the others) could not have been for air.

To the south of the pyramid are two boat pits which are rectangular in area, not boat-shaped as are the other ones in the pyramid complex. Roofed with huge limestone slabs, both of these boat pits contained real boats of cedar, disassembled and resting on the floor. The first boat was discovered in 1954 and it took many years to reassemble and restore the 1,223 pieces. Shaped as the model of a small craft of papyrus reeds, the reassembled boat is huge – 43.3 meters long. It can now be seen in a specially built museum in front of the pyramid (see Plate 6.3). The boat's hull was made of huge planks of cedar, each carved to fit the curved form. It was not held together by nails or joints, but was lashed together by ropes drawn through slots carved in the wood. The oars were also lashed to the side of the boat. On top of the hull are an enclosed cabin and canopied tent.

In 1987 a team of scientists led by Farouk El-Baz (Director of Boston University's Center for Remote Sensing) investigated the still closed second boat pit through a specially drilled hole in a ceiling block (see Figure 6.7). This boat was not as well preserved as the one found in 1954. After photographs were taken and atmospheric monitors were left inside, the boat was left in its pit.

Older boat burials have been excavated at Abydos, near the funerary enclosure of a 2<sup>nd</sup>-Dynasty king (see 5.6). Possibly Khufu's boat burials are symbolic, for an afterlife voyage such as is depicted in later images of the sun-god Ra. But a better explanation is offered by Mark Lehner, who thinks that Khufu's preserved boats were used in a real funeral voyage, and afterwards had to be ritually buried.



**Figure 6.7** Disassembled boat, which was investigated in 1987 and is still in a boat pit next to Khufu's Great Pyramid, Giza. Claude Petrone/National Geographic Image Collection

## Box 6-B Constructing the Great Pyramid at Giza

The best description of how a Giza pyramid was constructed is to be found in Mark Lehner's *The Complete Pyramids* (1997), from which most of the following information has been taken. Lehner has excavated and worked at Giza for much of his adult life, and he also supervised a very instructive experiment to construct a small pyramid for the PBS television series *Nova*, which can be seen on the video "This Old Pyramid."

Before construction began the base of Khufu's pyramid was surveyed, and I. E. S. Edwards (British Museum) suggested that the very accurate alignment of its four sides to the four cardinal points was achieved by observing the rising and setting of a star and then bisecting this angle to find true north. This could also have been calculated using the shadows of the rising and setting sun. One north-south side of the pyramid could then be surveyed, possibly using vertical markers set in place with a plumb bob, and the lines of the other sides could be calculated by making a right angle. After the surveying, a foundation platform of fine limestone blocks was laid out and leveled with great accuracy. Tools used for surveying and leveling were very simple: a set square (two planks of wood forming a right angle); a plumb bob attached to a rod (for vertical measurements); and a square level (a plumb bob hanging from an A-shaped frame for leveling surfaces).

The large limestone blocks that were used to construct the core of Khufu's pyramid were quarried locally, from a quarry which Lehner has located southeast of the pyramid. Quarrying was done along a narrow channel cut in the bedrock by a workman, and blocks were removed with the use of wooden levers. A finer quality of limestone from the Tura quarries, across the river and to the south of Cairo, was used on the outermost casing blocks covering the pyramid. The huge granite blocks of interior chambers and passages were quarried at Aswan and brought downstream by barge, which then moved through canals to the harbor near the pyramid site. Tools of stone, wood, and copper were used for quarrying limestone, but the much harder granite had to be quarried by creating channels with large hand-held pounders of dolerite, a very hard stone.

Stone blocks were dragged from the quarry site or harbor on a wooden sledge. Even though the Egyptians knew about the wheel, they continued to use

this method to move large stone blocks and statues. Different theories have been suggested for a construction ramp(s) up the side(s) of the pyramid, but Lehner thinks that the ramp wrapped around the pyramid. He has also excavated walls southeast of the pyramid that were the retaining walls of a ramp or roadway from the quarries.

The construction ramp was made of stone chips and mortar, reinforced on top with wooden beams, as suggested by evidence of a transport road at a Middle Kingdom pyramid site at Lisht. This road was covered with a layer of limestone chips and gypsum plaster, and Lehner suggests that for the pyramid ramp a top layer of Nile mud, lubricated with water to decrease the friction, would have provided a good surface for pulling a stone block up on a sledge. The use of water is depicted in a scene from a Middle Kingdom tomb at el-Bersha, of the transport of a large statue on a sledge (see Figure 7.7).

At the Great Pyramid the stone blocks were laid in horizontal courses, frequently with small stones and debris filling irregular spaces between the blocks. The outermost casing stones of Tura limestone were cut on one side at the angle of the pyramid's slope. As the construction ramp was disassembled, the exterior sides of casing blocks were dressed with copper chisels.

Lehner has calculated that the Great Pyramid could have been constructed with two work crews, each with 2,000 workers, for quarrying, hauling, and setting the stones. More workers were needed to construct the ramp. These unskilled workers would have been conscripted from the peasant farmer class. Carpenters, metal workers, potters, rope makers, and other specialists were also needed to make the tools and supplies used by the construction workers. Bakers and brewers working at the production facility that Lehner has excavated at Giza would have provided food and drink for the workers, who also needed to be supplied with clothes and possibly sandals (see Figure 6.11). Additionally, architects/builders and skilled artisans were probably permanently employed by the king. A total of 20–25,000 skilled and unskilled workers may have made up the entire pyramid work force. If the workers' families were also there, possibly as many as 150,000 people were living at Giza – a huge city that probably sprawled over a very large area.

## 6.5 The Great Sphinx and Khafra's Pyramid Complex

Radjedef, who followed his father Khufu on the throne, built his pyramid to the north of Giza at Abu Roash. This pyramid may never have been finished, as Radjedef reigned for only eight years. Little remains of the structure, which seems to have been destroyed in post-Dynastic times.

Also a son of Khufu, Khafra succeeded his brother on the throne. Although his pyramid at Giza appears to be taller than Khufu's, this is an illusion as it was built on a higher area of the Giza plateau. The base line of the pyramid is 215 meters, and its height was 143.5 meters. Toward its top the pyramid form has a slight twist, evidence of a problem in aligning the four corners to meet at the apex. Inside, the pyramid has a much simpler design than that of Khufu's. Two descending passages lead from the north to a horizontal passage and the burial chamber cut into the bedrock, which contains a black granite sarcophagus. A subsidiary chamber at the bottom of the lower descending passage may have been for a statue (*serdab*).

One subsidiary pyramid is outside the southern wall of the pyramid, and to the east is the mortuary temple, which is much larger than that of Khufu's complex. The temple was designed with an entrance hall, columned court, five niches for the king's statues and five storerooms, and an inner sanctuary – which becomes the standard plan of all later royal mortuary temples. Much of this temple was lined with huge granite blocks; its fore part was constructed with megalithic limestone blocks.

Connecting the mortuary temple to the valley temple, the causeway is almost 1.5 kilometers long. The inner T-shaped hall of this temple, which is well preserved, was constructed with an travertine floor, and huge pillars, ceiling blocks, and wall casings in polished red granite. Twenty-two bases for statues of the king are along the walls of this hall, with another statue base in the end. One of these statues, of the seated king in polished gneiss, is now in the Cairo Museum (see Figure 6.8). The king is depicted wearing the *nemes* headdress (a royal linen head-covering), behind which is the protective falcon deity Horus.

To the north of the valley temple is an unusual second temple which was never finished. Called the Sphinx Temple, it has a court similar in plan to that in Khafra's mortuary temple, and unusually, two sanctuaries on the east and west. To the west of this temple is the Great Sphinx, the southern side of which is aligned with the central axis of the temple (see Plate 6.4). The Sphinx was carved out of a huge natural formation in the limestone bedrock, and blocks in the valley temple have been identified as limestone quarried from around the Sphinx's body. Small stone blocks on the Sphinx's body and paws were added later and the monument has been restored many times: in the 18<sup>th</sup> and 26<sup>th</sup> Dynasties, in Greco-Roman times, and in the 20<sup>th</sup> century. With Khafra's head in the *nemes* headdress, the Sphinx's body is that of a crouching lion, a symbol of the king. Lehner has suggested that the east-facing Sphinx is symbolic of the king making offerings to the sun god.

There is New Kingdom evidence of renewed interest in the Sphinx's cult. Amenhotep II built a temple to the northeast of the Sphinx, and many commemorative



**Figure 6.8** Khafra statue from the valley temple of his pyramid complex at Giza. Ian M. Butterfield/Alamy

stelae were left there, including the “Dream Stela” of Thutmose IV. In the text of this stela Thutmose describes falling asleep under the Sphinx’s neck. He has a dream in which the Sphinx appears, telling the prince that he will become king if he clears away the sand surrounding the monument and restores it.

To the east of the valley and Sphinx temples was a harbor where materials and supplies could be brought to the site by boat. If not full all year, the harbor, which was probably fed by canals, would have filled with water during the flood season. A stone construction sometimes called a quay is located to the east of Khafra’s Sphinx Temple, and it may have also continued in front of the valley temple.

To the south of Giza at Zawiyet el-Aryan an unfinished pyramid which probably dates to the 4<sup>th</sup> Dynasty was intended to be almost as large as Khafra’s. A large pit for the burial chamber, paved in huge blocks of granite and limestone, and a descending passage were carved into the bedrock. An enclosure wall had also been built, but the king who started this project has not been securely identified.



## 6.6 Menkaura's Giza Pyramid and its Remarkable Valley Temple Finds

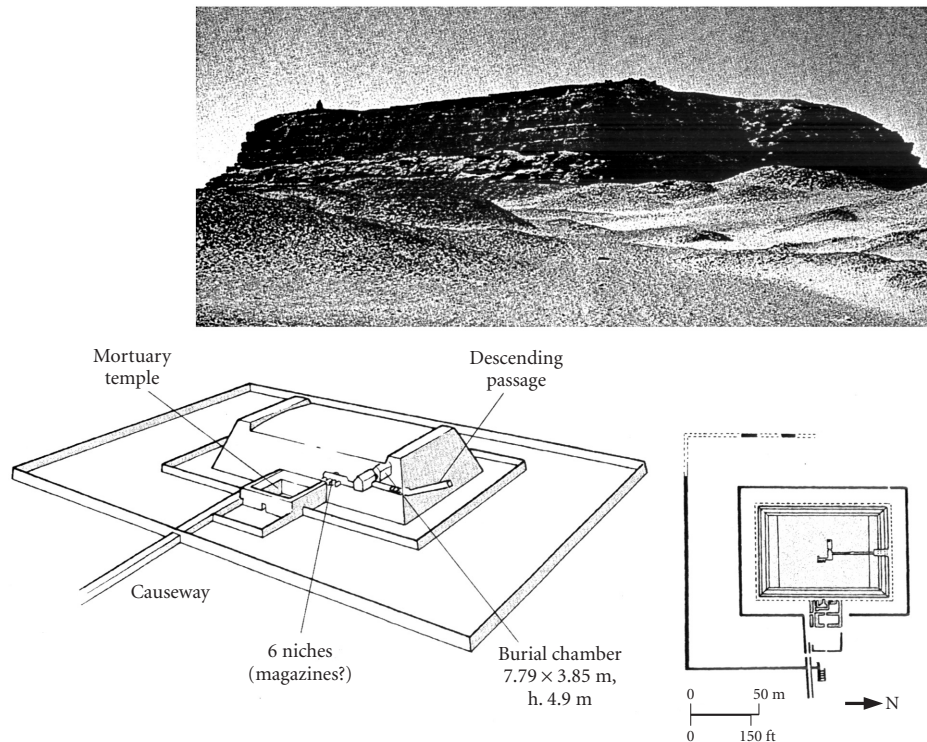
From Khufu's pyramid in the northeast to the smaller unfinished pyramid of Menkaura in the southeast, the southeastern corners of all three Giza pyramids are aligned diagonally. According to Lehner's calculations, the mass of Menkaura's unfinished pyramid is only  $\frac{1}{10}$  of that of the Great Pyramid. Originally ca. 65 meters high, with a base of 102.2 meters  $\times$  104.6 meters, Menkaura's pyramid had lower courses covered in costly granite casing stones. A complex arrangement of interior passages and rooms includes a subterranean granite-lined burial chamber, a possible statue chamber with six niches, and a chamber with the false door design carved on its walls. In the burial chamber was an ornately carved sarcophagus, which was shipped to England by Howard Vyse in the 19<sup>th</sup> century, but it went down with the ship in a Mediterranean storm. Human bones found in an upper chamber have been radiocarbon dated, but are from post-pharaonic times. Remains of a young female were also found in one of the three so-called queens' pyramids to the south of the pyramid's enclosure wall. Two of these pyramids either are unfinished or were intentionally built in stepped form.

Both the mortuary and valley temples of Menkaura's pyramid complex were unfinished in stone, and were hurriedly completed in mud-brick. These temples were excavated in the early 20<sup>th</sup> century by George Reisner (see 1.4), who meticulously recorded all finds in drawings, photographs, and field notes. In the mortuary temple Reisner found fragments of a colossal travertine statue of Menkaura, and in the valley temple were triad statues of the king with the goddess Hathor and a provincial deity.

The exquisitely carved pair statue of Menkaura embraced by his chief wife Khamerernebt II is one of the great masterpieces of Old Kingdom art (see Plate 6.5). Its ancient appearance would have been quite different, however, as traces of paint still visible on the surface suggest. Reisner also found 15 statuettes of the king in various stages of carving, which demonstrate the step-by-step methods used by the royal sculptors.

The 4<sup>th</sup> Dynasty ends with the short reign of Shepseskaf, Menkaura's successor, who built a very large mastaba tomb (99.6 m  $\times$  74.4 m), not a pyramid, at South Saqqara now called the Mastabat el-Fara'un (see Figure 6.9). Surrounded by a double wall, the monument has most of the elements of a pyramid complex: mortuary temple on the east, causeway, and (an unexcavated) valley temple. The burial chamber was lined with granite blocks, forming a vaulted ceiling.

It is probably significant that Shepseskaf's funerary monument and Menkaura's pyramid were much smaller than the other two Giza pyramids. Menkaura probably reigned for 29 years, and even though part of his pyramid was built with costly granite casing blocks brought by barge from Aswan, it was planned on a much smaller scale than those of his predecessors. Lehner has suggested that perhaps there was much less space on the Giza plateau to build a third large pyramid. Others have suggested that as the pyramid became smaller in scale, the temple complexes expanded – which is definitely seen in the later Old Kingdom, when the pyramids were not only much smaller but



**Figure 6.9** Plan of Shepseskaf's tomb at Zawiyet el-Aryan. Source: Mark Lehner, *The Complete Pyramids*. London: Thames and Hudson, 1997, p. 139

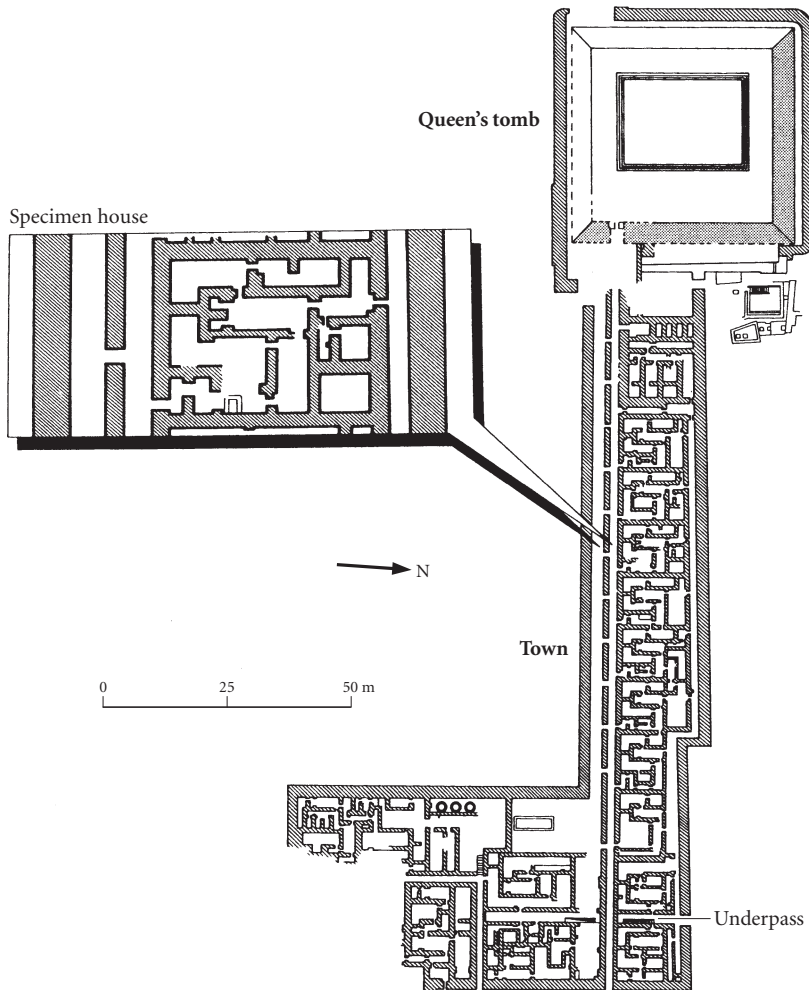
were also less solidly constructed. This may reflect an ideological change connected to the increasing importance of the cult of the sun god, with less importance placed on the actual tomb of the king.

There also may have been economic reasons that all other royal tombs after those of Khufu and Khafra were much smaller. Possibly later kings did not have the economic means to build such enormous monuments, nor the ideological means to justify such constructions. But perhaps it is also worth asking why the pyramids of Sneferu, Khufu, and Khafra are such aberrations in size compared to all the others of the Old Kingdom.

## 6.7 Giza Pyramid Towns

In his excavations at Menkaura's valley temple, George Reisner found the remains of small mud-brick houses next to the temple wall. Occupation expanded eventually into the valley temple, where more small houses and storage facilities were found. The cult of the dead king continued to be serviced in the valley temple, but the growing number of people living in this town may represent more and more people taking advantage of the tax-free status of Menkaura's pious foundation.

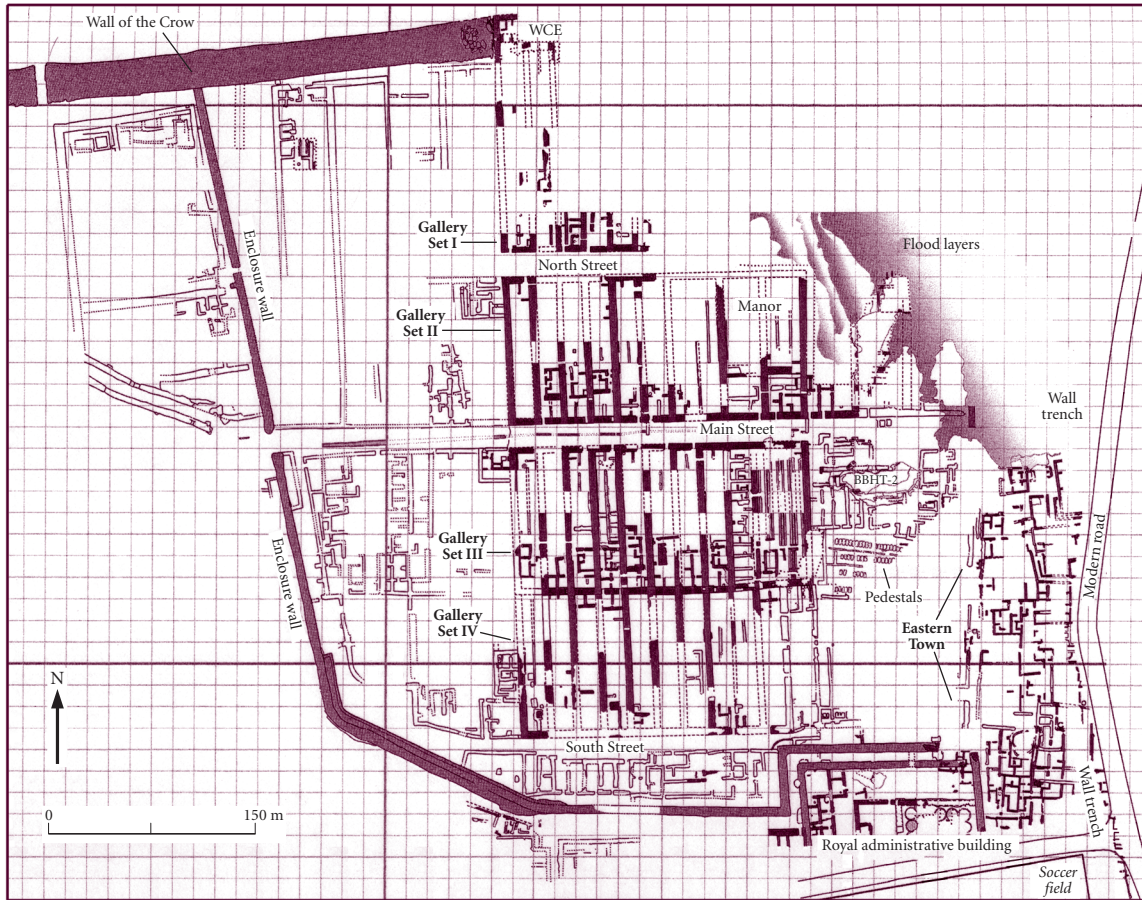




**Figure 6.10** Plan of the funerary cult town of Queen Khentkawes, Giza. Source: B. J. Kemp, *Ancient Egypt: Anatomy of a Civilization*. London: Routledge, 1989, fig. 50. Copyright © 1989 by Routledge. Reproduced by permission of Taylor and Francis Books UK

Associated with the Giza mastaba tomb of Queen Khentkawes of the late 4<sup>th</sup> Dynasty is a mud-brick settlement with houses of the later Old Kingdom, located near Menkaura's pyramid town (see Figure 6.10). Built along the tomb's causeway with an extension to the south, the settlement was excavated by Egyptian archaeologist Selim Hassan in the 1930s. This is where the personnel associated with the queen's mortuary cult were housed in small modular structures, with a larger building in the southern extension.

Petrie suggested that the long narrow rooms to the west of Khafra's pyramid, aligned north-south, were the remains of a pyramid workmen's town, but Lehner's excavations there found evidence of royal craft workshops. Although most of these rooms



**Figure 6.11** 4<sup>th</sup>-Dynasty pyramid town at Giza, excavated by Mark Lehner. Source: Mark Lehner, *The Pyramid Age Settlement of the Southern Mount at Giza*. *JARCE* 39 (2002): 27–74. Reproduced by permission of Mark Lehner

had been carefully cleaned out, sculptor's models, trial sculptures, fragments of small statues, debris from carving in various stones, and stone tools were all excavated there. Another industrial area for working/carving travertine, associated with ovens and hearths possibly used for the production of pots and copper tools, was excavated to the southeast of Menkaura's pyramid by Abdel Aziz Saleh (Cairo University) in the 1970s.

The largest known pyramid town at Giza is being excavated by Mark Lehner (see Figure 6.11). About 400 meters to the east of Menkaure's valley temple and just south of a huge stone wall (7 m wide) called the "Wall of the Crow," is a 4<sup>th</sup>-Dynasty royal complex. The walled town was organized in four sets of long narrow galleries with mud-brick walls. At the south end of one of the galleries (Set III-4) is a mud-brick house, perhaps for a supervisor, to the north of which is a long central bench, to support columns of a roof canopy. Sleeping platforms were found to either side of the central bench,

and Lehner thinks that this was some kind of workmen's barracks. Possibly 1,600–2,000 construction workers, who served there for short periods of time, could have slept in these galleries. A two-room bakery was excavated in this area in 1991 – with ceramic bread molds and vats for mixing dough still in place, and evidence of fish processing was also found. Much more evidence of the bakeries which supplied bread to the workers has since been excavated. In another area there was evidence of granite working, including a thick layer of granite dust and chips, produced by pounding granite blocks with stone mauls.

To the southeast of the long galleries is what has been called a royal administrative building surrounded by a double wall, where many fragments of mud sealings, of Khafra and Menkaura, have been found. Seven grain silos have been excavated so far in a storehouse in this building, which probably supplied barley to the numerous site bakeries. Small clay “tokens” found there in round or oval shapes may have been used as accounting devices for bread. Evidence of copper and alabaster working has also been excavated in the building's northwest corner.

### **Box 6-C Botanical and faunal analyses at Kom el-Hisn, a Delta cattle estate**

Located in the northwest Delta, the site of Kom el-Hisn was investigated by Robert Wenke (University of Washington) in the mid-1980s. Remains of mud-brick buildings were excavated there with evidence of domestic activities (hearths, storage pits, etc.). Calibrated radiocarbon dates and pottery place the major period of site occupation in the 5<sup>th</sup> and 6<sup>th</sup> Dynasties.

The excavated animal bones at Kom el-Hisn were studied by Richard Redding. Bones of wild waterfowl and fish, as well as domesticated sheep, goats, and pigs were identified. The botanical remains suggested an unusual interpretation of the faunal evidence. Although there were very few cattle bones, a large quantity of cattle dung had probably been used at the site – as dung cakes that were burned for cooking, which is still practiced in rural Egypt. Marie-Francine Moens and Wilma Wetterstrom identified the carbonized remains of plants that most likely would be found in cakes of cattle dung. These included animal fodder (such as clover), field weeds, cereal straw, and reeds and sedges. The types of plant remains in the dung cakes, and the absence of grass seeds, also suggest that the cattle may have been raised in pens where they were fed fodder.

The evidence of very few cattle bones and large quantities of cattle dung used for fuel may indicate that cattle were raised at Kom el-Hisn and shipped out for consumption elsewhere – possibly for support of an Old Kingdom pious foundation or a state construction project. Cattle that were kept in stables and fattened for slaughter are also known in reliefs. The people living at Kom el-Hisn then subsisted on cultivated wheat and barley that was supplemented by the meat of other wild and domesticated animals.

At Mark Lehner's excavations of the Giza production facility, Redding found a high proportion of cattle bones, mostly of males less than two years old. The age/sex data of the cattle suggest that males were bred for consumption and then butchered at Giza at an optimal age for their meat. Since there was no evidence of dung cakes for fuel at Giza – where the evidence of wood was abundant (dense deposits of charcoal) – the cattle were raised elsewhere (such as at Kom el-Hisn), where their dung accumulated and was used for fuel. Fattened cattle were then sent from a cattle-raising estate in rural Egypt to a state production facility or mortuary cult in the Memphis area.

A large house on the north side of the so-called “Main Street” may have been for an overseer of the entire complex. To the east of the gallery complex is the “Eastern Town,” with much less formal architecture than in the gallery complex. Possibly many of the pyramid workers were housed more permanently in the Eastern Town, where courtyards, corridors, and houses with small rooms and thin mud-brick walls have been found. Test trenches excavated to the west of the gallery complex, in what is called the “Western Town,” suggest the existence of larger houses than in the Eastern Town.

Galleries in the northeastern part of the royal complex were later destroyed by floods coming down a wadi, and Karl Butzer has also found evidence of a fair amount of rainfall at the site which degraded the mud-brick. Lehner thinks that the gallery complex began to fall into ruin after Menkaura’s death, and then was intentionally dismantled.

## **6.8 Giza Mastabas, Queen Hetepheres’s Hidden Tomb, and the Workmen’s Cemetery**

Although few of the lowest status persons were buried at Giza – the unskilled laborers who quarried stone and hauled blocks up to the pyramids – Giza tombs demonstrate a stratified society, from the king and royal family, to high officials, to various overseers and elite workers at the pyramids. To the east and west of Khufu’s pyramid are a number of high status mastaba tombs of the 4<sup>th</sup> Dynasty. At that time, the office of vizier was held by a number of royal princes – which probably reflects tight family control of the state. In life and in death these viziers retained close ties to the king.

Many of the mastabas associated with Khufu’s pyramid were excavated by George Reisner. Essentially these mastabas were solid structures with stone casing over a core filling. Inside was an offering chamber with a carved “false” door, the symbolic entrance through which the deceased traveled to receive offerings. A vertical shaft led to the burial chamber cut below in the bedrock. The tomb of Queen Meresankh III, a queen of Khafra’s, has several subterranean chambers, including a chapel with an impressive row of figures carved against the wall.

The mastabas were initially laid out in planned rows, with larger double tombs for members of the royal family to the east of the Great Pyramid. Complicating this plan are intrusive tombs of the 5<sup>th</sup> and 6<sup>th</sup> Dynasties, built in between the earlier ones. Some of the western tombs were first built with solid superstructures and an exterior decorated stela, but were later modified with interior chapels. Rock-cut tombs of Khafra’s and Menkaura’s family members are located farther south, in quarry areas near their pyramids.

The finely modeled bust of Prince Ankh-haf (Khafra’s vizier, see Plate 6.6) comes from the largest tomb in the cemetery to the east of the Great Pyramid, while the seated statue of Khufu’s corpulent vizier and overseer of works, Hemiunu, is from one of the largest tombs in the western cemetery. In some of the Giza tombs, in the burial chamber or at the bottom of the vertical shaft, Hermann Junker and Reisner found





**Figure 6.12** “Reserve head” from a mastaba tomb to the west of Khufu’s Giza pyramid. akg-images/Erich Lessing

what have been called “reserve heads,” portrait-like limestone heads (without the rest of the body) (see Figure 6.12). Junker’s explanation for these artifacts is that they were a substitute in case the head of the deceased’s mummy was destroyed. More recently, Roland Tefnin has suggested that they were “magical heads,” which were mutilated in connection with execration rituals. The intentional destruction seen on these heads can possibly be explained by passages in later religious and mortuary texts.

The Giza tomb of Hetepheres I, the wife of Sneferu and the mother of Khufu, was found accidentally by Reisner’s photographer in 1925. Located to the south of the causeway of Khufu’s pyramid, the tomb had no superstructure. The undisturbed burial chamber was at the bottom of a very deep vertical shaft (30 m) filled with stone, but when opened there was no mummy in the alabaster sarcophagus. Reisner thought that Hetepheres’s original burial was elsewhere, possibly at Dahshur near one of her husband’s pyramids, but when it was robbed her son Khufu reburied her tomb goods near his pyramid. It has also been suggested that the queen’s body was robbed before the intended burial in this tomb, or that her true burial was in one of the three queens’ pyramids of Khufu’s complex, and was subsequently robbed. Another interpretation of this underground chamber is that it was not a tomb, but a ritual deposit of the queen’s funerary equipment.



**Figure 6.13** Restored furniture found in the Giza tomb or ritual deposit of Queen Hetepheres I, the chief queen of Sneferu and mother of Khufu. Werner Forman Archive/Egyptian Museum, Cairo

Wood from Hetepheres's furnishings had decayed, but on the chamber's floor were gold inlays and gold foil, which originally covered some of the furnishings. Meticulous care was taken in the chamber's excavation – every fragment was recorded in notes, photographs, and drawings, which enabled the reconstruction of a sedan chair, bed and headrest, two chairs/thrones, and a tent canopy and box containing linen that covered it (sewn with gold rosettes) (see Figure 6.13). Silver bracelets of the queen's were decorated with butterfly designs of inlaid carnelian, lapis lazuli, and turquoise.

In another area at Giza, to the west of the royal production complex, Zahi Hawass has been excavating a cemetery with hundreds of tombs belonging to project overseers, artisans, and laborers. Pottery and inscriptions help date the cemetery to the 4<sup>th</sup> and 5<sup>th</sup> Dynasties. Tomb superstructures include mud-brick pyramids, domed forms, and mastabas, with the burial in a subterranean shaft. A small group of tombs belonging to higher status persons is located up a ramp at a higher elevation of the escarpment. Larger than the tombs in the lower part of the cemetery, these tombs are rock-cut or made of mud-brick covered with limestone. Craftsmanship of tomb artifacts is of higher quality than in the lower cemetery, as are the inscriptions carved or painted around the false doors. The most important title found in the upper cemetery is "Director of

the King's Work." Tomb inscriptions include curses for tomb robbers, threatening attack from crocodiles and hippopotamuses. Women were also buried in this cemetery, including a priestess of the goddess Hathor, and one female burial was of a pregnant dwarf. Well preserved, painted statues of tomb owners have been excavated in *serdab* chambers, as well as smaller figurines.

Human remains from this cemetery have been studied by scientists at the Egyptian National Research Center. Age at death for many of the men was 30–35, while a number of women were younger, probably dying in childbirth. The burials were not mummified, indicating their relatively lower status. Most burials were in a contracted position, with head to the north facing east – not fully extended in coffins as in higher status burials. Work-related problems, such as degenerative arthritis and limb fractures – and even amputations – are evident in a number of skeletons.

### Box 6-D Belief in burial and the afterlife

Although the symbolism of prehistoric burials in Upper Egypt cannot be specified because written funerary texts are a much later development, some basic beliefs concerning the afterlife are probably symbolized in these burials. In the Naqada culture the body was buried in a grave and was sometimes protected by coverings such as reed mats or animal skins. If not disturbed by grave robbers or scavengers such as jackals or hyenas, unummified bodies placed in pits in the desert could be remarkably well preserved in the arid environment. For example, at Naqada in 1978 Kathryn Bard excavated the burial of a child that still had brain tissue in the cranium. Some Predynastic burials at Hierakonpolis, with limbs covered in bark (see 5.3), may even represent an effort to preserve the body artificially. The deceased was to be symbolically nourished in the afterlife, and was provided with real food, and probably beer and water in large jars. Bread has been found in some Predynastic burials at Armant, and a bowl with barley seeds was in the Naqada child's burial that Bard excavated. Artifacts that the deceased would have used and enjoyed in life, such as jewelry, hair ornaments, and cosmetic palettes, were also placed in some Predynastic burials.

For those of means, more protection of the body and grave goods was possible with the development of tomb architecture in the Early Dynastic Period. The

burial was below ground: the 30 meter shaft cut in the bedrock and filled with masonry leading to Queen Hetepheres I's burial chamber (ritual deposit?) at Giza is evidence of the great efforts taken to protect some burials. In the burial chamber the preserved body was placed in a coffin or sarcophagus. A tomb superstructure called a mastaba covered the burial shaft. This was where offerings were placed by family members and/or priests, first in specially designed niches on the mastaba's exterior, and later in an offering chamber inside the structure.

In the offering chamber was a niched false door, above which were carved mortuary texts of the offering formula (*hetep di nesu*), which was another way to magically provide sustenance for the deceased. Blocked off and not a real door, the false door was the route through which the deceased's *ka* traveled from the subterranean burial to the offering chamber. Also in the mastaba was a small sealed off room (*serdab*) for the deceased's statue, often with a slit for the statue to look outside. The Opening of the Mouth ceremony enabled the deceased to breathe, eat, and speak in the afterlife, and was performed on the mouth of the deceased's statue by a priest with special tools.

It was believed that there were three elements of a person's existence in the afterlife: the *ba*, *ka*, and *akh*, which have no real equivalents in Judeo-Christian

and Muslim beliefs. The *ka* is often translated as “life force”; it was the “personality” of a living person and an aspect of the deceased that required offerings left in the offering chamber. Royal pyramids may also have had a *ka* statue chamber or a small *ka* pyramid. The *ba* is often translated as “soul,” but it is perhaps better to think of it as a manifestation of an individual’s self after death. Depicted as a human-headed bird from the New Kingdom onward, the *ba* traveled between the tomb and the world of the afterlife. The *akh* is associated with “effectiveness” in life and transfiguration in the afterlife. For the afterlife, the *akh* needed the correct mortuary texts/spells to be rendered effective. It may have a similar meaning to “spirit,” with both good and bad results for the living – and an angry *akh* could affect the living adversely. As Mark Lehner has succinctly stated in *The Complete Pyramids*, “the reunion of the *ba* with the *ka* is effected by the burial ritual, creating the final transformation of the deceased as an *akh*.”

For the *ba* to exist the body of the deceased had to be preserved, which was the ideological reason for mummification. Zahi Hawass has recently found evidence at Saqqara of a 1<sup>st</sup>-Dynasty official whose bones were covered with resin, and evidence of bodies wrapped in fine linen is also known from this period.

Bodies could also be wrapped in linen (including each finger and toe) that was soaked with resin, and molded to appear more lifelike – and less putrified. By the 4<sup>th</sup> Dynasty there is evidence of evisceration, which meant that the internal organs were embalmed separately. Although the body of Queen Hetepheres I was missing from her Giza “tomb,” her viscera were discovered in a travertine container divided into four compartments, which had been placed in a special sealed recess. The viscera had been preserved in a natron solution, which was still in three of the compartments.

After burial the body was believed to be reunited with its internal organs. Later Old Kingdom mummies were wrapped and modeled in linen that was then painted with facial features and hair. Sometimes even the genitalia and breasts were articulated in linen, and modeling was also done in plaster on the mummy. The brain’s true function was unknown and it was usually removed from the cranium: the heart was thought to be the seat of intelligence. True mummification of the entire body, in which the remaining muscles/tissues and bones were packed with natron solution, became technologically advanced in the New Kingdom (see Box 8-C) – but it was very costly.

## The Later Old Kingdom

### 6.9 Sun Temples of the 5<sup>th</sup> Dynasty

Although there must have been a temple for the sun god at Heliopolis, now a suburb northeast of Cairo, the evidence there from the Old Kingdom is meager: inscribed fragments from shrines of Djoser’s and Tety’s, and a broken obelisk with Tety’s cartouche. With the 5<sup>th</sup> Dynasty a new type of cult temple developed to honor Ra – in addition to the symbolism inherent in royal pyramids – demonstrating the increasing importance of this god’s cult and theology. From inscriptions it is known that six kings of the 5<sup>th</sup> Dynasty built sun temples, which in terms of support were closely associated with their pyramid pious foundations. Only two sun temples have been discovered, however – those of Userkaf and Nyusera at Abu Ghurab, to the northwest of Abusir, where



four of the 5<sup>th</sup>-Dynasty kings built their pyramids. Userkaf, the first king of the 5<sup>th</sup> Dynasty, built the first sun temple, and Menkauhor's was the last one.

Why the construction of sun temples began in the early 5<sup>th</sup> Dynasty, and ended abruptly with Menkauhor's temple, is not known. British archaeologist David Jeffreys has drawn sight-lines from the 4<sup>th</sup>-Dynasty pyramids at Giza to the location of the sun temple (*Iunu*) across the river at Heliopolis. But there was no more room on the Giza plateau to build later pyramids, and the 5<sup>th</sup>-Dynasty pyramids were built farther south – and out of sight of the *Iunu*. Possibly the 5<sup>th</sup>-Dynasty royal monuments had a dual focus: sun temples were built within sight of these kings' pyramids, with a direct link between the burial place of the king and the cult center of the sun god.

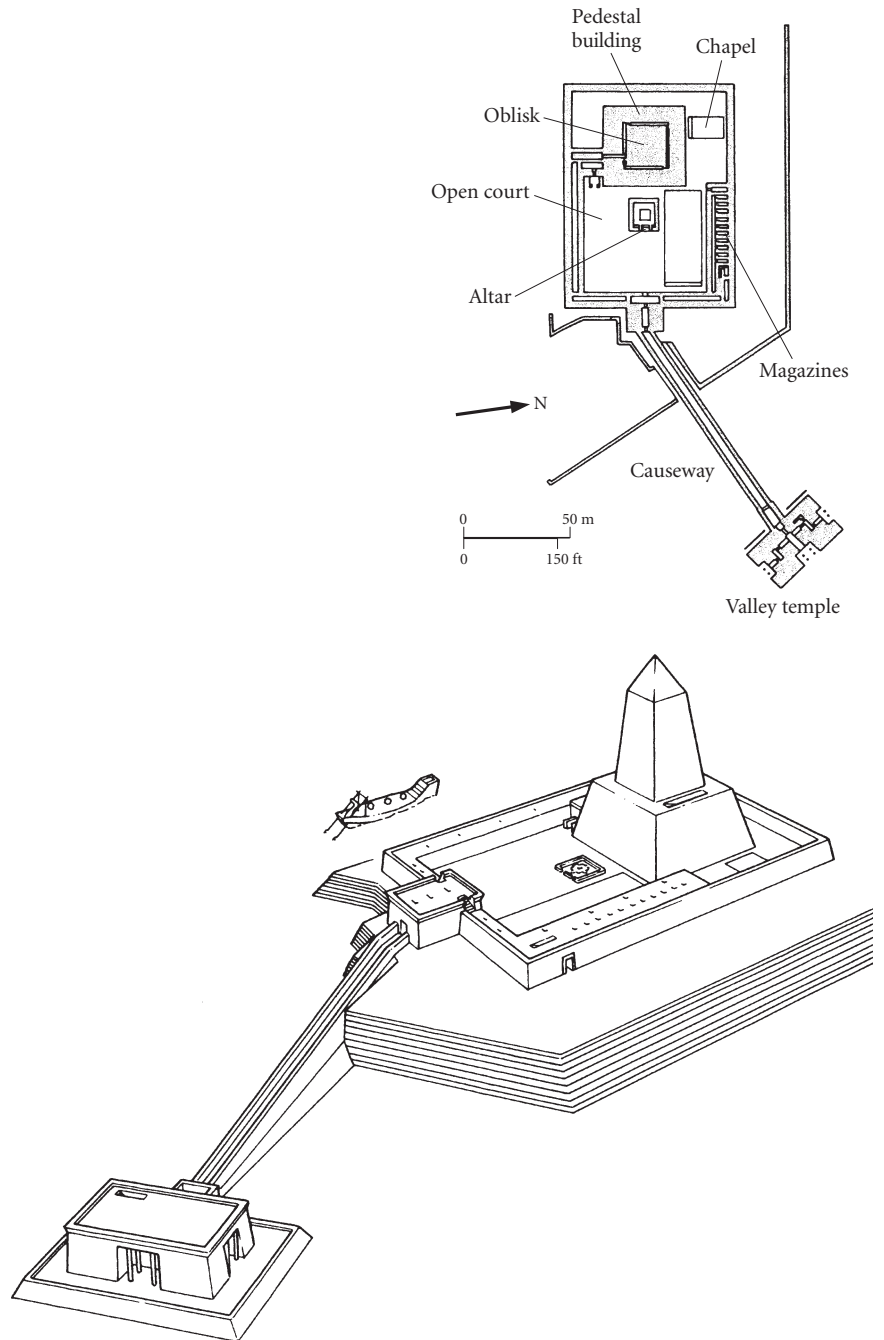
In some respects the sun temples were similar to pyramid complexes. Nyuserra's sun temple complex has a small valley temple at the edge of cultivation, connected by a causeway to the main temple, which was walled (100 m × 76 m) (see Figure 6.14). The main monument, however, was not a tomb, but has been reconstructed as a *ben-ben*, a hieroglyphic sign (which looks like a kind of squat obelisk). Both of the surviving sun temples were not well preserved, and this reconstruction is based in part on the form of hieroglyphic signs of the temples' names.

Nyuserra's sun temple was excavated in 1898–1901 by German archaeologist Ludwig Borchardt working with Egyptologist Heinrich Schäfer. Parts of the temple complex were first built in mud-brick, and later in stone. Its monument was erected on a high platform of limestone blocks, with steeply inclined sides and granite around the base. Instead of having a temple on the east side of a pyramid, Nyuserra's sun temple has a large open court, with an open-air altar of five travertine slabs on the east side. Borchardt thought that channels and basins on the north side of the walled temple were for cattle slaughtering, but no other equipment associated with such activity was found there. Miroslav Verner, a Czech archaeologist who has worked for many years at Abusir, suggests that this area was for purification ceremonies using liquids. To the south of the monument was a small chapel and the "Room of the Seasons," decorated with beautifully carved, low reliefs depicting scenes from two seasons, including harvesting.

To the south of the temple wall was a large model of a boat (ca. 30 m × 10 m) in mud-brick. A village, probably for temple personnel and administration, was located outside the walls of the sun temple; it has not been excavated.

## 6.10 Later Old Kingdom Pyramids and the Pyramid Texts

After Menkaura's pyramid, Giza was no longer the site of pyramid construction. Probably the most important factor in choosing a pyramid site was a substantial bedrock base, and later pyramids were located to the south of Giza. Userkaf, the first king of the 5<sup>th</sup> Dynasty, built his pyramid near Djoser's Step Pyramid complex at Saqqara. Stripped of its casing stones, Userkaf's pyramid now looks like a huge heap of stone and rubble. With a base line of 73.3 meters and ca. 49 meters high, Userkaf's pyramid is even smaller than Menkaura's – the smallest pyramid at Giza. Later Old Kingdom pyramids were not only less solidly constructed than those at Giza, but were also of a



**Figure 6.14** Plan of Nyussera's sun temple complex at Abu Ghurab. Source: Mark Lehner, *The Complete Pyramids*. London: Thames and Hudson, 1997, p. 151

smaller size, which became standardized: 150 cubits in length and 100 cubits high. (The cubit was a measure of length, about 52.5 cm long.)

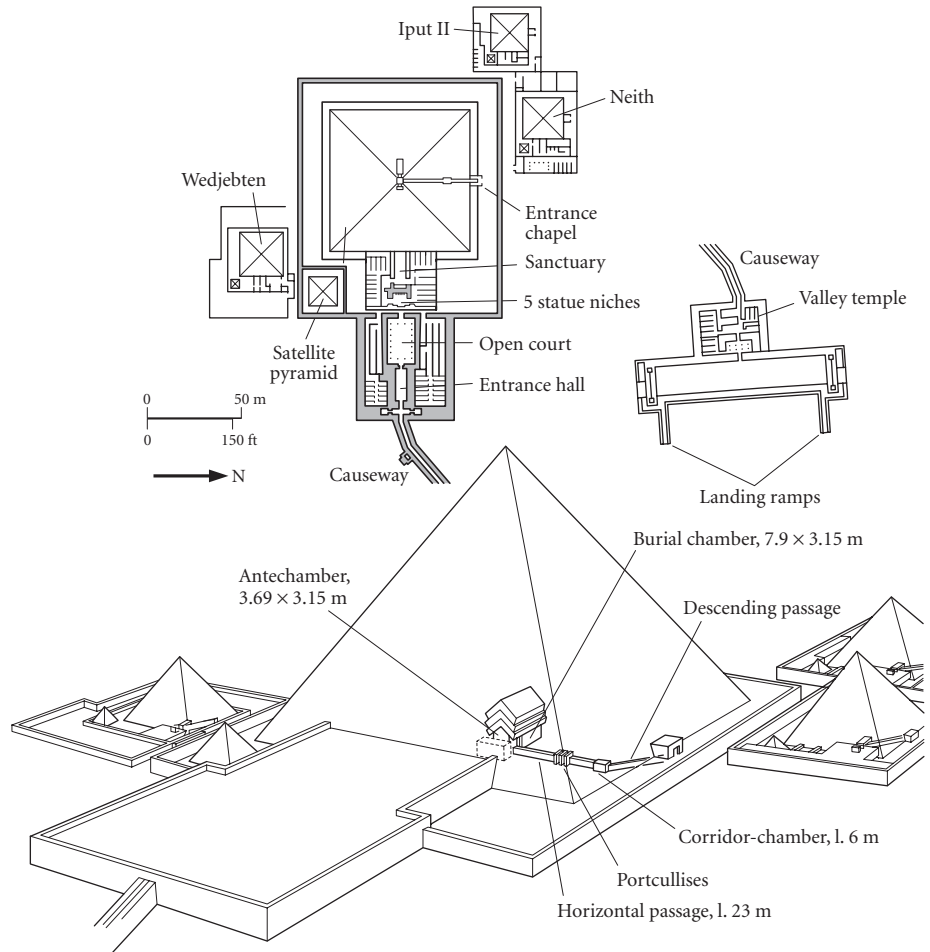
Excavations conducted at Userkaf's pyramid complex by Egyptian archaeologists later in the 20<sup>th</sup> century uncovered a mortuary temple built to the south of the pyramid, and a small offering chamber on the pyramid's east side. The temple contained many fragments of fine, low relief.

After Userkaf, four kings and one queen (Khentkawes, the wife of Neferirkara) built pyramids to the north of Saqqara at Abusir, not far from Userkaf's sun temple. The first of the Abusir pyramid complexes, which was built by Sahura, was excavated 1902–8 by Ludwig Borchardt. With a base line of 78.75 meters and ca. 47 meters high, its pyramid is similar in size to that of Userkaf's. Sahura's large mortuary temple consists of a long entrance hall, columned court, behind which were many storerooms, five statue niches, and an offering chamber. Later mortuary temples would emulate this plan. In the temple's offering chamber, which was carved with a false door, was an offering basin with a copper drain.

A greatly expanded program of relief sculpture is found throughout Sahura's pyramid complex – possibly as much as 10,000 square meters, not including the reliefs in the 235-meter-long causeway. At the entrance to the valley temple were reliefs of Sahura trampling his enemies, and inside the temple were scenes of the king hunting, fowling, and fishing, and dispatching Egypt's enemies. One of the first scenes of sea-faring ships is also carved on an inner temple wall.

From Abusir come some remarkable records, the Abusir Papyri. In fragments, one set of papyri associated with Neferirkara's Abusir pyramid was found by villagers in 1893. Other Abusir papyri, excavated much later by Czech archaeologists, come from the temples of King Raneferef and Queen Khentkawes. The hieratic papyri from Neferirkara's temple, which were recorded in a later reign, contain inventories of temple contents, and records of ceremony schedules, from daily offerings to festivals. They provide information about temple priests and personnel and their rotating schedules, as well as elaborate daily accounts of provisions, from the pyramid's agricultural estates and other royal institutions. These papyri thus provide a rare glimpse into the complex economic relationships and administration of an Old Kingdom royal mortuary cult – and the sophistication of ancient Egyptian bureaucracy.

Another remarkable body of texts, known as the Pyramid Texts, first appears in the Saqqara pyramid of Unas, the last king of the 5<sup>th</sup> Dynasty, whose monument is to the south of Djoser's complex. Hieroglyphs of Pyramid Texts are carved in the pyramid's antechamber and burial chamber, which was also decorated with carved designs of reed mats and tent poles – and a star-covered ceiling. Although many of these texts are much older than the late 5<sup>th</sup> Dynasty (the oldest surviving ones are from Sahura's temple, and written mortuary texts could possibly go back to the early Old Kingdom), they do not appear in pyramids until Unas's reign (see Plate 6.7). Two-hundred eighty-three separate "spells" are found in Unas's Pyramid Texts, and more than 800 spells are known altogether, from this pyramid and those of the 6<sup>th</sup> Dynasty. Of several different types, the spells were essentially for the king's burial and protection, and transformation in the afterlife.



**Figure 6.15** Plan of Pepy II's pyramid complex at Saqqara. Source: Mark Lehner, *The Complete Pyramids*. London: Thames and Hudson, 1997, p. 161

The kings of the 6<sup>th</sup> Dynasty also built their pyramids at Saqqara, in the north (Tety), and south (Pepy I, Merenra, and Pepy II, see Figure 6.15). Pepy II's pyramid, near the late 4<sup>th</sup>-Dynasty tomb of King Shepseskaf, was excavated after World War I by Swiss archaeologist Gustave Jéquier. Like all of the Old Kingdom pyramids, this one had been robbed, with only a basalt sarcophagus and sunken canopic chest (for the separately mummified viscera) still in place in the burial chamber.

Like most of the 5<sup>th</sup>- and 6<sup>th</sup>-Dynasty pyramids, the core of Pepy II's pyramid consists of (five) steps with retaining walls. According to Mark Lehner, the core was made in the manner of pyramid construction ramps, with irregular stones set in local clay (*tafla*) and mud. The core had then been encased in blocks of Tura limestone, and a huge "girdle" of stone was added later.

Three walled queens' pyramids lie outside the pyramid's enclosure walls. Pyramid Texts are found carved inside the queens' pyramids (as well as in the king's pyramid). In a secondary enclosure outside of Queen Wedjebten's pyramid were symbolic houses and offering chambers of a family of priests who shared indirectly, through the queen, in the endowment of Pepy II's mortuary cult.

To the east of Pepy II's pyramid was an elaborate mortuary temple, and at the end of the causeway were a small valley temple, platform, and ramps, which probably led to a harbor or canals. The temples and causeway were all decorated with reliefs. The two components of the mortuary temple (an entrance, columned court, and storerooms; and a sanctuary, statue niches, and storerooms) are longer than the base line of the pyramid – which is probably indicative of the temple's relative importance in the complex's program and ritual.

## 6.11 An Expanding Bureaucracy: Private Tombs in the 5<sup>th</sup> and 6<sup>th</sup> Dynasties

After the 4<sup>th</sup> Dynasty the state was run by an increasing number of bureaucrats, who built an increasing number of tombs, which were decorated and furnished by a proliferating group of highly skilled artisans centered around the Memphis court. As families of officials and priests continued in their offices, the bureaucracy kept on expanding (although evidence of this – titles inscribed in tombs – were probably inflated). Naguib Kanawati (Macquarie University) has argued that eventually, in the late 5<sup>th</sup> and 6<sup>th</sup> Dynasties, fewer resources may have been available for tombs of lower and then middle status officials.

Later Old Kingdom private tombs are found throughout Egypt, but the highest status Memphite tombs, for members of the royal family and high officials, were usually located near each king's pyramid. Tombs of high officials had multi-roomed mastabas covered with reliefs. Some tombs had many statues, including painted ones of the tomb owner or a husband and wife pair, sometimes with their much smaller children, in the closed *serdab*. Many of the tomb reliefs are scenes of “daily life,” including farming and craft activities. Scenes of offering bearers with quantities of food and drink were in addition to real food, small models of food, and model servants performing food preparation activities in the tomb. Most tomb goods, especially jewelry and inlaid furnishings, were usually robbed, but they were often depicted in scenes.

In reliefs the tomb owner is usually shown in a larger scale than anyone else, symbolic of his relative importance. Above the false door of the tomb chapel was a carved relief of the tomb owner seated before an offering table, with the offering formula text (*hetep di nesu*) on the lintel. Titles and names of the tomb owner were carved around the false door, to identify the tomb owner's status in the afterlife, and sometimes there were longer biographical inscriptions.

Some large family mastabas at Saqqara of the late Old Kingdom have multiple *serdabs* and burial shafts for the different family members – and up to 40 rooms decorated with reliefs. To the north of Djoser's Step Pyramid are a number of well preserved tombs,



**Figure 6.16** Painted relief with scenes of boat construction from the 5<sup>th</sup>-Dynasty tomb of Ti, Saqqara. © Archivo Iconografico, S. A./CORBIS

including that of a high 5<sup>th</sup>-Dynasty official named Ti, excavated by Auguste Mariette in 1855. Ti was married to a royal princess, and among his titles was overseer of the sun temples at Abusir. The largest interior space in Ti's mastaba is a columned court, in the center of which is the entrance to the subterranean passage to the burial chamber. Scenes in fine low relief decorate the walls of the mastaba's interior rooms (see Figure 6.16). In one scene of Ti and his wife, who has her own offering niche in the tomb, are entertained by singers and musicians playing the flute and harp. Reliefs of animals, both domesticated and wild, contain very life-like details, including geese being fattened by force-feeding, and a cow, assisted by a farmer, giving birth to a calf. In a scene of Ti in a papyrus marsh, two foxes look for birds' eggs. Craft scenes include those of ship-builders, carpenters making furniture, and women weaving linen.

The Saqqara tomb of Mereruka, who was the son-in-law of King Tety (6<sup>th</sup> Dynasty), was discovered by Jacques de Morgan in 1893. Near Tety's pyramid, the mastaba of this tomb contains 33 rooms and corridors, some of which were for Mereruka's wife, Hertwaket-khet, and his son, Mery-tety. Reliefs in the tomb include an animated desert scene with long-legged *tjesem* hounds (similar to greyhounds) hunting wild cattle, hares, and a lion, and Mereruka hunting in a papyrus marsh filled with birds, fish, and a hippopotamus (see Figure 6.17). High-status Egyptians hunted for sport, and clearly wished to continue such activities in the afterlife. Some very curious scenes in this tomb also suggest attempted domestication of wild animals, including tethered gazelles and a hyena being force-fed. Such experiments, which are also known from other tombs, were not successful, however.





Figure 6.17 Relief scene of hunting in the desert, from the 6<sup>th</sup>-Dynasty tomb of Mereruka, Saqqara

By the mid-5<sup>th</sup> Dynasty provincial administrators/governors (nomarchs) began to be buried in their provinces, not in Memphis, and later in the dynasty a new office appeared, that of governor/overseer of Upper Egypt. The provincial administrators were paid by the crown in the form of local land where farmers/workers lived, and food and goods were produced. In the 6<sup>th</sup> Dynasty, these offices became inherited positions, along with the associated land, and governors also began to hold important priestly titles. Thus administrative and economic control of the central government waned in the provinces (mainly in Upper Egypt) – and the increasing power of these provincial governors is reflected in their tombs.

In the Middle Cemetery at North Abydos Janet Richards (University of Michigan) has excavated the large mastaba tomb of Weni the Elder, whose long biographical inscription was found by Auguste Mariette in 1860. Weni the Elder's career as an official spanned the reigns of the first three kings of the 6<sup>th</sup> Dynasty, and his biographical text provides important information about the increasing power of this provincial center in the late Old Kingdom – and the erosion of central power. The context of this inscription was unknown until Richards located the tomb. Her excavations have also revealed the monumental context of Weni the Elder's burial: a mastaba ca. 30 meters × 30 meters, to the northeast of which is a chapel where new reliefs and inscriptions have been found.

Although mastaba tombs were built in Upper Egypt, many of the larger tombs of nomarchs from the late 5<sup>th</sup> Dynasty onward were carved into the cliffs beyond the floodplain to either side of the Nile. Façades of these tombs were cut to resemble a mastaba, with interior rock-cut rooms. Offering chambers were carved with false doors and often

had rock-cut pillars and statues in niches. The burial chamber was also rock-cut, at the bottom of a shaft or ramp. In larger tombs there could also be additional rooms, including storerooms and *serdabs*. Decoration of the tomb was in relief scenes similar in themes to those of “daily life” found in Memphite tombs.

Rock-cut tombs at Aswan dating to the 6<sup>th</sup> Dynasty were carved in three rows on a sandstone cliff to the north of Elephantine Island, and mastaba tombs have been discovered to the east, closer to the river. Some of the more elaborate rock-cut tombs had an exterior courtyard and causeway leading to the valley. Biographical inscriptions in some of these tombs are especially informative about Egyptian relations with Nubia at this time. One of the Aswan governors, Harkhuf, who was also “Keeper to the Door of the South,” left inscriptions in his tomb about his four overland expeditions (by donkey caravan) to the land of Yam, probably in Upper Nubia. Serving under King Merenra and then Pepy II, Harkhuf returned to Egypt with the products of Punt, such as elephant ivory, incense, and ebony. He also recruited Nubian guards/soldiers, and in the last expedition he recorded bringing back a dwarf, to the great delight of the king.

Provincial cemeteries in the Old Kingdom were not only for high status elites. At Naga el-Deir, across the river from Bet Khallaf and Reqaqna (see 6.2), George Reisner excavated a number of cemeteries from 1901 to 1904. Tombs of the Old Kingdom were found at 12 locations. The earlier Old Kingdom tombs were mastabas of mud-brick or stone plastered with mud, over burial pits or shafts leading to a roughly cut subterranean chamber(s). The later Old Kingdom tombs in Cemeteries 100–400 were rock-cut, and some also had a rock-cut chapel. The lowest status Old Kingdom burials were simple pit graves. David O’Connor has interpreted the large impressive 3<sup>rd</sup>-Dynasty tombs at Bet Khallaf and Reqaqna as being the burials of royal officials, while the local elite were buried in tombs on the east bank at Naga el-Deir – a pattern which continued in the 4<sup>th</sup> and 5<sup>th</sup> Dynasties. Lower status individuals were also buried at Naga el-Deir in simple graves. To O’Connor these burials suggest a four-tiered social structure in the Thinite region in the early Old Kingdom and at least three tiers later.

In the Faiyum region at Medinet Gurob, British archaeologists Guy Brunton and Reginald Engelbach excavated an Old Kingdom cemetery in 1920. Of the 156 individuals buried there, traces of coffins were found for only seven. Most of the burials were contracted and placed in “shapeless” graves in the loose sand. Brunton and Engelbach remarked about the general poverty of these burials – and even pots were “almost absent.” While the Gurob Old Kingdom burials have been interpreted as low status ones, they demonstrate the importance of burial ritual for these individuals.

## 6.12 Egypt Abroad

Outside the Nile Valley, expeditions were sent by kings of the Old Kingdom to obtain goods and materials, for which there is much inscriptional evidence. Beginning with Djoser’s reign, there are Old Kingdom rock inscriptions in southern Sinai, in the mining area of the Wadi Maghara, and evidence of an Old Kingdom settlement



and industrial area for smelting copper. This settlement was not continuously occupied, but expeditions were sent there by kings of the different dynasties for turquoise and copper.

In the Eastern and Western Deserts there are numerous rock inscriptions of Old Kingdom quarrying expeditions. Kings of the 4<sup>th</sup> and 5<sup>th</sup> Dynasties sent expeditions to the Wadi Hammamat, to obtain greywacke for statues, and there are inscriptions of Khufu and Radjedef, as well as 5<sup>th</sup>-Dynasty kings, at a gneiss quarry in the Nubian Western Desert northwest of Abu Simbel, where stone for Khafra's seated statue was quarried. Expeditions continued into the late 6<sup>th</sup> Dynasty, as rock inscriptions of Pepy II in the Eastern Desert and south Sinai attest.

Dakhla Oasis in the Western Desert was connected to major trade routes along desert tracks – east and north to the Nile Valley through Kharga Oasis, and south to Sudan. At the eastern end of Dakhla Oasis there is extensive evidence of a late Old Kingdom/First Intermediate Period settlement, which was first discovered in 1947 by Akhmed Fakhry. Since 1977 the site of Balat has been excavated by the French Institute of Archaeology, Cairo. A copy of a decree by Pepy II establishing the settlement was found on a stela in one of three funerary chapels belonging to oasis governors. Covering an area of ca. 40 hectares, remains of the settlement include a governor's palace with vaulted two-story store rooms (reign of Pepy II), an earlier fortified enclosure, and pottery workshops. Also associated with the settlement is a cemetery with six mud-brick mastaba tombs of governors, excavated under the direction of Michel Valloggia (University of Geneva). These mastabas date to the reigns of Pepy I and Pepy II – one belonged to a son of Pepy II – and there are also lower status burials of several types.

Sea-faring expeditions were probably more complicated than overland ones, requiring, in addition to organizational skills, the know-how and materials to build large ships, and navigating and sailing skills. Sneferu sent a large fleet of ships to obtain cedar (probably to the Lebanon), as recorded on the Palermo Stone. In the 5<sup>th</sup>-Dynasty mortuary temple of Sahura another sea-faring expedition to the Lebanon is depicted. The cedar boat timbers buried in pits next to Khufu's pyramid are evidence of such expeditions.

Nubia held special interest to the Egyptians, which is indirectly reflected in the development of Egypt's border town at Elephantine. Large fortification walls of the 2<sup>nd</sup> Dynasty were maintained throughout the Old Kingdom. Excavations of the German Archaeological Institute uncovered a 3<sup>rd</sup>-Dynasty administrative complex with a small step pyramid, but it later fell into disuse when the area was used for craft production, and then for a cemetery. The local goddess Satet also had an important cult center, which in the Old Kingdom was repeatedly rebuilt in mud-brick.

In the early 4<sup>th</sup> Dynasty Sneferu sent a military expedition to Nubia that, according to the Palermo Stone, returned with 7,000 captives and 200,000 cattle. Who these captives were and where they were from in Nubia cannot be specified. As a result of Egyptian military penetration in Lower Nubia in the 1<sup>st</sup> Dynasty, the A-Group had disappeared, however, and Sneferu's expedition probably raided Upper Nubia. At Buhen North, near the Second Cataract, evidence of a fortified town built in the 4<sup>th</sup> Dynasty was excavated in the 1960s by the Egypt Exploration Society. Buhen was probably a major trading

center with regions to the south, and seals of 4<sup>th</sup>- and 5<sup>th</sup>-Dynasty kings have been found there. But Egyptian control of Lower Nubia ceased by the 6<sup>th</sup> Dynasty, when indigenous peoples, whom George Reisner called the C-Group, began to be buried there.

The origins of the C-Group are unknown. Potsherds with similarities to a C-Group ware have been found at locations in the Western Desert as far south as the Wadi Howar (northern Sudan) – possible evidence for cultural antecedents to the C-Group. They may have been related to semi-nomadic groups who lived in Upper Nubia (and were related to the A-Group). A-Group peoples may also have moved farther up the Nile – and into the hilly regions to the east of the river. Then when Egyptian presence in Lower Nubia ended in the late Old Kingdom, an opportunity opened up for semi-nomadic peoples to settle in this part of the Nile Valley.

Egyptian expeditions to Punt are known from 5<sup>th</sup>-Dynasty texts. Although Egypt withdrew from Lower Nubia before the 6<sup>th</sup> Dynasty, the crown was still very interested in the exotic raw materials that came through Nubia to Egypt. Nubian places/regions that the Egyptian expeditions visited are mentioned in Harkhuf's tomb inscriptions and other texts, but their locations are debatable. There would be no indigenous writing system in Nubia until the late 1<sup>st</sup> millennium BC (the Meroitic language, which is imperfectly understood), so historical information about much of Nubian history is only found in Egyptian texts, most of which were written from a biased perspective.

According to David O'Connor's analysis of the late Old Kingdom textual evidence, Wawat was in Lower Nubia, where the earliest C-Group people were living. Irtjet and Setju were located in Upper Nubia, where a powerful polity would arise at Kerma by ca. 2000 BC – that would later become a great threat to Egypt's control of Lower Nubia. Yam may have been still farther south, to the west of Punt. Harkhuf's records of dealings with the leaders of these regions suggest that there were chiefs controlling parts of Wawat, Irtjet, and Setju. A powerful and probably wealthy ruler with control of trade held forth in Yam.

## The First Intermediate Period

### 6.13 The End of the Old Kingdom and the First Intermediate Period: Causes of State Collapse

Collapse of the Old Kingdom polity occurred following the reign of Pepy II. Essentially what followed in the so-called First Intermediate Period was political fragmentation, with the formation of much smaller polities whose power bases were in provincial Egypt, and much competition and aggression between these polities. The First Intermediate Period, however, was not a time of collapse of ancient Egyptian civilization, which continued in renewed forms for more than two thousand years.

A number of reasons for the collapse of the Old Kingdom state have been offered by scholars. These basically fall into two categories: (1) environmental stress, and (2) socio-political pathologies.

The major environmental stress cited for the First Intermediate Period is lower Nile floods. The Neolithic wet-phase, in which moister conditions than today prevailed episodically in Egypt, was finished by the beginning of pharaonic times. But a more arid environment than in Predynastic times did not hamper the accumulation of huge agricultural surpluses that supported the Old Kingdom state and its monument building. Texts relating to the First Intermediate Period studied by Barbara Bell, an astronomer at Harvard University, cite low Nile floods (among other problems). Although texts she used are not First Intermediate Period in date and their historical accuracy may be questionable, short-term fluctuation of Nile levels is a real possibility.

According to Karl Butzer's more recent examination of the evidence of Nile floods, there were relatively low floods after 2900 BC, with a brief minimum ca. 2200 BC, and exceptionally high floods ca. 2150–1900 BC. Low Nile floods would have meant less land under cultivation – and lower crop yields. Butzer has calculated that the population of Egypt almost doubled between 3000 and 2500 BC (from 0.87 to 1.6 million). With such a large population in the later Old Kingdom and problems in agricultural yields, famine for some may have been the result. Possibly the state could have responded to environmental problems of low Nile floods with technological intervention, such as sponsoring irrigation works, but this did not happen.

An environmentally deterministic explanation for the collapse of the Old Kingdom is not sufficient by itself, however. The period of the lowest Nile floods was relatively brief, but socio-political problems were clearly developing in the later Old Kingdom. As more land went out of state ownership, to support pious foundations (pyramid cults, temples, and mortuary cults of individuals), direct income of the crown and state ownership of land decreased. Royal decrees which exempted a number of pious foundations from taxation also increased the problem of state income. The political decentralization that developed in Upper Egyptian provinces in the 6<sup>th</sup> Dynasty, with increasing control of local resources, was followed by the political fragmentation of the First Intermediate Period. Lastly, the long(?) reign of Pepy II may have led to a certain amount of political corruption and uncertainty about who would succeed him, which would have contributed to undermining the central authority of the state.

After Pepy II's death, the 6<sup>th</sup> Dynasty ended with the rule of a queen, Nitiquet. Manetho lists "70 kings in 70 days" for the 7<sup>th</sup> Dynasty, and this unreal number probably symbolizes the political confusion of the times. For a period of about 20 years an uncertain number of "kings" (of the 7<sup>th</sup> and 8<sup>th</sup> Dynasties) may have tried to hang on to the vestiges of kingship at Memphis, but there seems to have been a breakdown of centralized control. One small monument may have been constructed by a king of the 8<sup>th</sup> Dynasty, Ibi, near Pepy II's pyramid at Saqqara. Discovered by Gustave Jéquier in 1929, Ibi's pyramid has a base line of only 31.5 meters – about the size of one of the queen's pyramids in Pepy II's complex. Its rubble core consists of small stones and mud. A small mud-brick chapel was found on the pyramid's east side, and the burial chamber contained a huge granite block for the sarcophagus.

Another monument from the First Intermediate Period is a mud-brick pyramid or mastaba at Kom Dara in Middle Egypt, first excavated by Ahmed Kamal in the early

20<sup>th</sup> century. The base line of this square monument (with rounded corners) is 130 meters – much bigger than Pepy II's pyramid. An entrance on the north side led to a sloping passage and subterranean tomb, lined with limestone slabs probably robbed from other tombs. A cartouche of a King Khuy was found in a nearby tomb, but this name is not known from other inscriptions. Thus the builder of this monument remains uncertain as does his power base, but not his grandiose aspirations.

Rulers of the 9<sup>th</sup> and 10<sup>th</sup> Dynasties eventually emerged at Herakleopolis (to the south of the Faiyum region). They controlled parts of northern and Middle Egypt, but in the Theban area and farther south there was the growing power base of local rulers (the 11<sup>th</sup> Dynasty), whose descendant Mentuhotep II eventually reunified Egypt. Herakleopolis was located at Ihnasya el-Medina, but this site has mainly been investigated for monumental remains of the New Kingdom and later.

The First Intermediate Period was a time of intense rivalry and alliance-making of various local rulers in the Upper Egyptian provinces, including Ankhtifi at Mo'alla, who controlled Nomes 2 and 3 (Edfu and Hierakonpolis). The biographical inscription in Ankhtifi's tomb provides information about this period of conflict. After gaining control of the Edfu nome, Ankhtifi took his small army northward where he threatened the Theban nome, but for unknown reasons he did not add Thebes to his sphere of control. Ankhtifi boasts of giving food to the hungry and clothing to the poor – claims that are also found in inscriptions of other local rulers of the period (as well as the late Old Kingdom). Such claims may in part have been standard rhetoric for rulers' tomb biographies or stelae, but they may also reflect real economic crises – of food shortages from low crop yields, looting, and/or disruption of farming activities.

Rulers such as Ankhtifi had some form of local political legitimacy, raised their own small armies (which in some cases included Nubian mercenaries), and controlled the economic resources of their districts. As a result, the local population owed their allegiance to him, and his political position was legitimized by his priestly position (overseer of priests) in the local cult of the god Hemen. What is missing is the concept of kingship that had developed since late Predynastic times – demonstrating a major change in ideology, at least in the southern provinces of Upper Egypt.

A large number of funerary stelae, of men of middle and even lower status, are also known from the First Intermediate Period. These stelae were carved with the offering formula, figure of the tomb owner and often family members, and sometimes a short biography. The style of these funerary stelae – often with crude, elongated figures carved in sunken relief – is indicative of their provincial origins, and they lack the refinement attained by sculptors in Old Kingdom Memphis (see Figure 6.18).

A great number of First Intermediate Period burials, of what might be termed middle and lower status, have been excavated in the many provincial cemeteries in Upper Egypt. Valuable artifacts in many of these burials, such as carved stone cosmetic containers and jewelry made from imported stone beads, seem to contradict the concept that this was an impoverished period throughout all of Egypt. Such artifacts probably reached a wider number of people than during the highly stratified Old Kingdom, when the rewards of royal expeditions were dispensed by the crown, and the highest quality craftsmanship was found in Memphis.



**Figure 6.18** Funerary stela of a priestess of Hathor, Setnet-Inheret, dating to the First Intermediate Period, from Naga el-Deir. Courtesy of the Phoebe Apperson Hearst Museum of Anthropology and the Regents of the University of California, catalog number 6-19881

German archaeologist Stephan Seidlmayer has shown that during the First Intermediate Period new types of non-functional artifacts were made for burials. In particular, crude wooden models of offering bearers and workshops, and painted cartonnage mummy masks (made of linen covered with gypsum plaster), became popular in lower status burials. In a different medium, these creations emulated the scenes depicted in earlier Memphite tombs. Thus, there was increasing demand for craftsmen's work in the provinces, as well as people there who could produce such goods.

Literature about the First Intermediate Period, written later, paints a bleak picture, in part to justify the re-imposition of centralized control by kings of the Middle Kingdom. During the First Intermediate Period provincial rulers and an increasing number of other members of society, however, seem to have benefited from a lack of centralization, as evidenced in their burials. Undoubtedly there were political conflicts

and disruption – and possibly impoverished times for many. A lack of royal monuments points to a lack of royal control of resources. But whereas petty polities like those of the First Intermediate Period were the norm in most of the Near East throughout the Bronze Age, a different concept of political power had developed in Egypt for almost one thousand years. As in the late Predynastic Period, a power base eventually emerged in the south, this time at Thebes, which would unify the country under a centralized kingship, initiating the Middle Kingdom.