

# **Part i**

## **Analysis of the Cluster**

## Chapter 1: DESCRIPTION OF THE CLUSTER

The mastaba tombs presented in this volume form a well-defined, largely contiguous cluster in the Western Cemetery at Giza. In addition to the location of their tombs, all the owners of decorated tombs in the cluster had in common one or more titles showing supervisory responsibility over the *hntjw-s* of the palace. This common sphere of activity reveals each tomb owner's rank relative to the ranks of his neighbors. His tomb can then be compared to his neighbors' tombs, to determine the effects of differences in rank on its characteristics.

Facilitating this comparison is the unusual exactness with which it is possible to date the tombs in this cluster. Their contiguity and the two apparent shifts in the orientation of the cemetery allow the cluster's growth to be charted with considerable precision. As a result, changes in practices of tomb-building and burial in the cluster can be observed over time, and these variations can be distinguished from variations based on the relative ranks of the tomb owners. The cluster is thus an ideal laboratory for addressing questions about the effects of rank on tomb building and about cemetery regulation and growth.

These questions are important not only in themselves, but because they may also shed light on the structure and development of Old Kingdom settlements. Given the Egyptians' identification of tombs as "houses of eternity,"<sup>1</sup> the growth of cemeteries may parallel the growth of urban settlements during the same period. By the same equation, some aspects of tomb architecture probably reflect the architecture of contemporary domestic structures, for example, proportions of rooms and the minimum dimensions required for corridors and doorways. Although there are limits to the usefulness of this analogy, any clues to settlement patterns are valuable, given the scarcity of well-excavated domestic structures and urban areas dating to the Old Kingdom.

To make full use of the information that Old Kingdom tombs offer, their overall forms and interrelationships must be examined in some detail. This chapter describes the architectural and decorative

features of the cluster, focussing on their variability and their distribution within individual tombs and within the cluster.

### The Architecture of the Mastabas

*Foundation.* The mastabas in the cluster appear to have been built directly on bedrock. Reisner surmised that the rock formation upon which the cluster rests was avoided during the building of the core cemeteries of large mastabas. He reasoned that its irregular surface, its sharp slope down to the north, and the frequency of "bad rock," a layer of red gravel and flint nodules that overlies it in some areas, made it undesirable. The slope of the underlying bedrock down to the north can be seen clearly in the shafts cut into the rock as well as the elevation drawn across a north-south section of the cluster (pl. 137). The tombs of this part of the cemetery, Reisner concluded, were built over what had previously been "a drainage gully through which rainwater ran off the terrace into the *wady* on the north."<sup>2</sup> However, the fact that substantial mastabas were eventually built in this area, and in other areas where the bedrock was far from ideal, casts some doubt on the degree to which Egyptian builders were limited by such considerations.<sup>3</sup>

*Wall Construction.* The mastaba tombs in this group were built entirely of stone, with the exception of a few mud-brick lined secondary shafts and some rubble-built structures of uncertain purpose. The mastabas are solid structures, consisting of a rubble fill retained by battered or stepped stone-built facades. Chapels and shafts are similarly lined with vertical retaining walls. Spur walls are not solid, but consist of a rubble fill within two parallel skins. The fill of mastabas and walls was not excavated by Reisner's team. Surface observation reveals that this fill often contained waste stone, granite fragments,<sup>4</sup> and discarded ceramics, including bread molds, beer jars, and model offering vessels (see figs. 21, 28, 54, 65, 75, 83, and 87).

The mastabas were built entirely of nummulitic limestone, probably quarried from other parts of the Giza plateau area. Some blocks contain veins of a purplish mineral that appear initially to be paint. Other blocks have a distinctive stratum of soft stone that weathers easily and appears as a white streak. This streak runs across several blocks in the final extension of 2088 at the same level, which implies that they were quarried from adjacent areas in a single stratum of stone. This is also true, though less strikingly, of the upper course on the west face of 2230 and in other areas. No granite or other non-native stones survives in architectural use. It may be that imported stone was used, but was removed by the time of the excavations, since such stone was often the first to be scavenged.

In mastaba 2097, the interior chapel walls are of a limestone with a noticeably higher proportion of nummulitic inclusions than that found in the chapel walls of other mastabas. This harder stone allowed the decoration to be carved into the stone itself rather than

<sup>1</sup> *Pr dt.* This conception of the tomb as a house is graphically demonstrated in the private tombs of the 2nd and early Third Dynasty, which contain platforms for sleeping and model bathrooms. J.E. Quibell, *Archaic Tombs, 1913-1914*, Excavations at Saqqara 6 (Cairo, 1923). It is somewhat less applicable in the Fourth Dynasty; A. Roth, "Social Change in the Fourth Dynasty: The Spatial Organization of Pyramids, Tombs, and Cemeteries," *JARCE* 30 (1993), pp. 33-55.

<sup>2</sup> Reisner, *Giza Manuscript*, Chapter "L," pp. 1-2

<sup>3</sup> This point was suggested to me by Michael Jones.

<sup>4</sup> The surface granite fragments may have derived from the removal of pillars and other architectural elements that originally belonged to the mastabas. No granite is now present in the cluster. Since the mastaba fill was not excavated, it was impossible to determine whether the granite fragments continued in sealed lower levels of the fill, or only occurred on the surface.

into a plaster facing (as was the case with wall decoration in most other tombs). Unfortunately, the weathering of the stone between the nummulitic inclusions and the greater whiteness of those inclusions has created distracting patterns that make the delicate low relief carving difficult to see and photograph. The fact that the south wall of the chapel, which was originally the north facade of 2096, also has such inclusions suggests that this nummulite-filled stone was also used for exterior mastaba facades, where the rough finish makes the nummulites less obvious, and the hardness and durability they lend the stone would be desirable. Since the decoration in 2097 is of a higher quality than that elsewhere in the cluster, it may be that this type of stone was more difficult to carve, and could thus be used for decorated walls only by a tomb owner who could afford to hire the most expert craftsmen.

A single thickness of exterior masonry seems to form both the retaining wall and the facade of these mastabas, in contrast to earlier mastabas, where a masonry inner retaining wall was usually faced with a separate casing. Reisner recorded three types of exterior masonry in the cluster, u-masonry, z-masonry, and w-masonry.

Z-masonry forms a stepped facade. Each facing stone has only a slight batter, of between 5° and 10°, but is set back about 5 cm from the front edge of the stone below it. The joints are level, and the courses are horizontal and of uniform height (usually about 35 cm). This facing tends to occur on the earlier mastabas in the cluster.

Among the later mastabas, the most common facade type is u-masonry, which forms a battered exterior wall with an angle of 10° to 15°. The courses tend to be horizontal and uniform, although there are sometimes steps in the horizontal joints. There is more variation in the heights of courses than with z-masonry, and they are generally higher, often around 50 cm in height. Vertical joints can be angled, though usually not more than 15°. Walls of u-masonry vary considerably in their degree of finish; in some walls, the faces of the blocks protrude less than a centimeter beyond the joints, while other walls extend 5 cm or more beyond that point.

Only a single mastaba, 2230, exhibited w-masonry, which is a battered rather than a stepped facade, distinguished by very large, very roughly finished blocks. As in u-masonry, the horizontal joints are level, and only occasionally stepped; but vertical joints seem to be more consistently vertical.

Both horizontal and vertical joints of even the most roughly finished walls were often filled with plaster, down the center of which a single line was scored. These lines appear to have been made with a sharp point while the plaster was still wet. They were perhaps intended to mimic the hairline joints of finer masonry. They occur on the exterior walls of mastabas of both u-masonry and z-masonry. They never appear on walls that were originally inside a fully roofed room, although they do occur on the interior walls of undecorated porticoes, corridors, and courtyards.

Like the scored line marking the joints of the blocks, the battered angle of exterior walls was also apparently felt to be inappropriate to roofed interior spaces. When additions converted previously open areas to interior spaces, various methods were used to make the battered and stepped exterior faces vertical. When the corridor in mastaba 2091 was enclosed and roofed, its eastern wall, which had

originally been the stepped west facade of 2098, was packed with filling blocks to create a vertical wall. The west wall of the corridor, originally the battered east facade of 2091, was cut back to form a more vertical, though still slightly battered, wall. When a portico was built against the exterior of 2091 and 2092, these previously battered faces were encased with a layer of new vertical masonry. In this example, the casing also had the function of disguising different types of facing on adjacent mastabas.

Entrance doorways also required modification when additional construction converted them to internal doorways. For example, the recesses on either side of the doorways of mastabas 2088 and 2230 were filled to a level flush with the adjacent walls when interior spaces were added beyond them.

Changes in the orientation of mastabas and in the functions of their rooms were often camouflaged. When a doorway was moved to another part of the chapel, the old emplacement was not simply filled in with a wall abutting both sides of the gap. Instead, the exterior faces of adjacent walls were partially rebuilt to disguise the change. Examples of such rebuilding are the north and south faces of 2231, the south and east faces of 2091, and the north face of 2097. The south faces of 2092+2093 and 2094 were probably similarly rebuilt, but this cannot be confirmed as they were not excavated by Reisner's expedition. In all these cases, the abutments are clear from the inside, so it is unlikely that the intention was cosmetic.

The "camouflaging" of abutments probably had a structural explanation, since it occurs only on the external faces of mastabas faced with u-masonry. The abutments to buildings with stepped facades (z-masonry) are not camouflaged, even in the case of 2088, where the stepped facade was abutted by a later u-masonry facade. It seems likely that rebuilding of the original wall and camouflaging of the abutment was made necessary by the instability of the angled joint that would result when a new wall abutted a battered facade. A stepped facade, in contrast, would offer more stability and support to a wall that abutted it.

*Tomb Types.* Reisner described each mastaba in this cluster by assigning it to a mastaba type, designated by a Roman numeral, a lower case letter, and (in every case but one) an Arabic numeral in parentheses. The basic types represented in the cluster range from his types vii through xi, all denoting mastabas faced with stone but with no inner lining of stone.<sup>5</sup> The distinctions between these five types depend upon the type of chapel: vii = chapel type (4); viii = chapel types (5), (6), (7), and apparently (10); ix = chapel type (8); x = chapel types (9) and apparently (11c); and xi = chapel type (9d). The lower case letter following the basic type corresponds to the type of facing masonry: a = w-masonry (battered, built of oversized blocks), b = z-masonry (stepped facing), and c = u-masonry (battered, built of normal sized blocks). The parenthetical number is one in all cases except for that of mastaba 2097, where it is omitted altogether. Reisner

<sup>5</sup> *GNi*, pp. 39–56.

does not explain these numbers, but they may refer to the number of rooms in the chapel.<sup>6</sup>

Chapel types (4), (5), (6), (8), (9), (10), and (11) are represented in the cluster. Unfortunately, Reisner failed to recognize that some of these shapes were not the result of the initial intention of the builders, but of successive alterations to the mastaba. For example, Reisner used one such tomb, 2091, as his type-tomb for the “corridor” chapel type (10c).<sup>7</sup> In fact, the shape of this chapel, like most other “corridor” chapels in this cluster, resulted from a shift in the orientation of the cluster to the north, which forced the closing off of southern entrances in 2086, 2091, 2092+2093, and 2094. These chapels were originally simple recessed chapels, rather like Reisner’s type (11), “portico” chapels, although they are narrower and deeper than his description of this type and contained no, one, or two pillars. When the south end of the passage between mastabas was blocked, the corridor formed by the facade and the back of an adjacent mastaba became the only access to the chapel. g 2098 and 2099 were presumably built in imitation of the resulting “corridor” style, and are the only true corridor chapels in the cluster, although in both cases the history of construction may also be more complex than it at first appears.

Another apparent imitation of a shape resulting from this reorientation is the chapel of 2097. It seems to copy the final form of the complex directly south of it, 2092+2093, resulting in Reisner’s chapel type (5d). The decorated chamber of 2097 is entered from the south, possibly originally through a courtyard. As in 2092+2093, the largest part of the inner room of 2097 is the recess in the west wall, which was decorated with a palace facade design. South of the recess is a dead-end corridor, somewhat wider than the blocked southern entrance of 2092+2093. The west wall of the corridor in 2097 is missing, but may have contained a false door parallel to that in 2093. In 2097, as in 2093, the principal shaft is directly behind this wall.<sup>8</sup> This chapel type, like (10c), imitated the final shape that resulted when successive changes were made to a chapel that was initially built as another type.

The earlier chapels in this cluster thus appear to be of three basic types, “recessed chapels” resembling Reisner’s type (11), “L-shaped chapels” of type (4), and simple “false door emplacements,” either set into an interior corridor to correspond to Reisner’s type (5) or into the east facade to create type (9). Modifications to these chapels resulted in forms that inspired types (5d) and (10c). The single “cruciform” chapel of type (6) that Reisner identified, 2086, is either a small recessed chapel or an L-shaped chapel with one end blocked off (as the pattern of decoration suggests). Reisner’s two roofed exterior

chapels of type (8) are simply porticoes that acquired false doors in later building phases.<sup>9</sup>

Mastaba chapels have either one or two original false doors (or, in the case of 2086, perhaps none at all). Interestingly, the number of false doors does not correlate with chapel type; recessed, L-shaped, and simple emplacements all occur with both one and two false doors. There also does not appear to be any correlation between the presence of two false doors and references to a wife in the chapel decoration. In only one case (2097) is the northern door dedicated to a woman.

*Architraves and Roofing blocks.* The ceilings of chapels and corridors were built of narrow limestone slabs (about 60 cm wide in 2091, the best-preserved case). Somers Clark and R. Englebach note that “limestone is not the medium for architraves; the most that can be spanned, for instance, by Tura or Ma’sara limestone is about 9 feet [= 2.75 m]. Even when such a space is spanned by an architrave, it will not bear roof-blocks with any likelihood of lasting.”<sup>10</sup> They quote a communication from Reisner in which he indicated that, at Giza, “the span over which the weight was borne was usually between 120 cm and 150 cm and over these roofs there was usually only a layer of filling 20 to 100 cm thick.”<sup>11</sup> This corresponds well with the evidence for roofing in the cluster. In the chapel of 2091, where the original ceiling survives, the space that is actually spanned by a single block of stone was about 1.6 m, the maximum span attested in this cluster. More often the gaps bridged seem to have been shorter, between 1 and 1.5 m, especially in the case of architraves that must themselves have supported roof blocks.

While in L-shaped chapels and corridors these roof blocks rested directly on walls, in recessed chapels they normally rested upon a limestone architrave that spanned the opening in the eastern facade, running north to south, sometimes with the additional support of one or more pillars. A central pillar allowed direct access to false doors at either or both ends of the west wall in 2091, 2094, 2098, and 2099; while the mastabas with two or no pillars, mastabas 2093 and 2097, had only palace facade decoration in the recess.

The roofs of recessed chapels approached by a corridor were similarly supported, with the architrave serving to divide the recess from the corridor. Several mastabas used the facades of earlier mastabas to the east to support the ceilings of their corridors. The owners of two mastabas, 2091 and 2098, apparently found it necessary to encroach further on their eastern neighbors (2089 and 2099) by removing the mastaba fill and building an inner face to support the western facades. The builders of 2094, 2086, and 2099 did not do this, perhaps because their corridors were not roofed (2086 and 2099) or because both facades supporting the roof were stepped rather than battered (2094).

g 2093 probably had at least two pillars, although only a single decorated pillar survives. If this had this been the only support, an

<sup>6</sup> Reisner’s typological assignments for the mastabas are listed at the beginning of their individual entries in Part ii, based on the information given in his *Giza Manuscript*, Chapter “L.” Most designations of mastaba types and chapel types are internally consistent. The exception was 2095, where the chapel type (9c) implies mastaba type x rather than the type xi listed (which would imply chapel type 8); I have registered this disagreement in a footnote. I have, however, corrected the mastaba type in 2093, to agree with a change made in ink to the chapel type, since Reisner’s final opinion was obvious. I have also corrected both the masonry types and the corresponding lower case letters in the mastaba type so that they reflect reality. (All corrected figures are given in square brackets.)

<sup>7</sup> *GN1*, p. 285 and fig 182 on p. 286.

<sup>8</sup> Reisner apparently also assumed there was a false door in this position, since he has assigned 2097 to his chapel type (5d), in which one or more false-door niches were located on the non-recessed part of the west wall.

<sup>9</sup> In chapel descriptions, I have used the verbal descriptions rather than Reisner’s types, to distinguish my interpretations from his. References to numerical types thus always reflect Reisner’s interpretations unless they are specifically described as reinterpretations.

<sup>10</sup> *Ancient Egyptian Masonry: The Building Craft* (Oxford, 1930), p. 12.

<sup>11</sup> *Ibid.*, p. 9.

architrave would have been required that spanned gaps of 1.85 m; with two pillars this would be reduced to 1.1 m, roughly equivalent to the gaps bridged by the architrave supporting the portico of 2240 and the interior architraves of 2091 and 2098. A block that may be the base of a second pillar was noted in the northwest corner of the recess in 1990. Alternatively, the architrave may have been of a stronger stone, such as granite. Granite fragments have been found on the surfaces of these mastabas, although no granite elements survive in situ. (If this was the case, the surviving limestone architrave fragment bearing the titles of this tomb's owner must be restored elsewhere in the mastaba, perhaps over the doorway at the blocked southern entrance to the chapel, not far from its position in 1987.)

The other chapels where the recess is too wide to be spanned by an unsupported limestone architrave are more problematic. The chapels of both 2097 and 2099 have comparatively shallow recesses. Even a central pillar of half the normal thickness of 50 cm would have allowed less than a meter between the back of the pillar and the west wall. Yet the north-south axes of these recesses (2.4 and 2.8 m respectively) are greater than the maximum that is normally spanned by a single limestone architrave.<sup>12</sup> A lost granite architrave may have spanned these recesses, allowing a roof with no pillars at all. In support of this, the preserved floor of 2097 shows no evidence of a pillar emplacement.<sup>13</sup>

In entrance porticoes, two pillars were normally used to support the architrave. They were not structurally necessary, but they did not block a central doorway as a single pillar would have done.

An examination of the proportions of recesses, porticoes, and corridors reveals some regularities in the spaces spanned by roofing blocks and architraves by the builders of these chapels (see fig. 1<sup>14</sup>).

Porticoes	
2088	0.9 m
2092+2093	[.9]
2097	1.0
2240	1.1
Recessed chapels with pillars	
2091	1.6 m
2093	ca 1.6
2094	1.45
2098	1.4
Recessed chapels without pillars	
2086	1.17 m
2097	1.2
2099	1.3

<sup>12</sup> Between 120 cm and 150 cm, according to Reisner in Clark and Englebach, *Ancient Egyptian Masonry*, p. 9.

<sup>13</sup> A limestone lintel-shaped block was found in 2097, but from its decoration it can be restored with certainty at the top of the south chapel wall. It may represent the reuse of a lintel from another chapel, although no earlier decoration was visible.

<sup>14</sup> The pillars in the courtyard between 2092+2093 and 2097 seem to have been moved or replaced when the function of the portico changed from being the entrance to 2092+2093 (for visitors coming from the north) to an entrance portico for 2097 (for visitors coming from the south). Their current position (about 1.6 m from the north face of 2092+2093) is at the maximum distance for the spanning of roof blocks in this cluster. However, in addition to the two notches in the walls on either side of the portico that supported the ends of the lintel that spanned these pillars, there is a third notch on the west wall, about .9 m (estimated) from the north wall of 2092. (The east wall is not preserved above this point.) This notch probably held an architrave spanning earlier, slightly higher pillars, which supported an entrance portico of standard depth for 2092+2093.

L-shaped chapels	
2088	1.15 m
2089	1.07
2230	1.5
2240	1.3
Corridors	
2084	1.1 m
2086	0.9
2087	1.0
2091	1.0
2093	1.05
2094	1.05
2095	1.0

Fig. 1. Variability in the dimensions of chapels, corridors, and porticoes. The measurements indicate the distance in meters spanned by roof blocks, either from the backs of pillars or jambs, or between walls.

While some of these regularities undoubtedly reflect the structural limitations of the limestone used in these chapels, other patterns cannot be explained structurally. The shapes of the spaces that are not structurally limited probably embody cultural ideas about the proper size and proportions of spaces. These proportions may in turn derive from the structural properties of the materials used in domestic architecture.

The corridor widths are the most consistent, and seem to be uniform even in unroofed spaces. They are comparable to domestic corridor widths as preserved in the houses along the causeway of Khentkawes at Giza.<sup>15</sup> This width probably represents the space the Egyptians felt was necessary to allow people to pass one another comfortably.

The depth of porticoes is presumably less restrained by the requirements of human anatomy. The examples in this cluster suggest, however, that porticoes were regularly built with a space of about 1 m between the back face of the pillars and the back wall. This depth may be determined by the depth allowed by the organic materials used to roof porches and porticoes in domestic buildings. Again, the single Old Kingdom domestic structure that seems to have had such a portico, from the Khentkawes settlement, seems to show similar depth.<sup>16</sup>

Recessed chapels were deeper, though still not approaching the structural limit. In later Egyptian domestic architecture, the principal living room was often a central room, roughly square in its proportions, with a high roof supported by a central pillar.<sup>17</sup> If such rooms were equally prevalent in Old Kingdom houses, it may be that their proportions influenced the depth of pillared tomb chapels, despite the difference in materials and resulting structural constraints.

Except for mastaba 2230, which is unusually large throughout, L-shaped chapels are shallower than most pillared recessed chapels. The three recessed chapels that seem to lack pillars are similar in depth to L-shaped chapels. The shallowness of the recessed chapel of 2086, the shallowest of the three, might be explained by the hypothesis that it was originally built as an L-shaped chapel, a possibility that is also suggested by anomalies in its decoration.<sup>18</sup>

<sup>15</sup> Selim Hassan, *Excavations at Giza 4, 1932-1933* (Cairo, 1943), fig. 1.

<sup>16</sup> *Ibid.*

<sup>17</sup> F. Arnold, "A Study of Egyptian Domestic Buildings," *VA* 5 (1989), p. 83.

<sup>18</sup> See the discussion of the decoration of this chapel in Part ii.

*Ceilings and Roofs.* It is possible to determine the height of a ceiling with certainty in only one chapel, 2091, where both the ceiling and the floor are preserved. The height of the chapel itself was 2.6 m,<sup>19</sup> while the lower ceiling of the closed-off entrance area (“closet”) was 2.3 m above the floor, a difference that allowed for a clerestory window. The ceiling of the serdab in the same tomb was 1.7 m high. The corridor between 2093 and 2094 also had a roofing block preserved, 2.15 m above the floor as excavated. The surviving height of the interior chapel of 2092+2093 is 2.33 m, but a floor may have been removed. Doorways are always considerably lower than the ceiling. The doorway at the north entrance to 2091 is 1.45 m in height, that of 2094 is 1.4 m, and that of 2092+2093 is 1.8 m, again possibly because of missing floor blocks. An exterior doorway in the passage between 2092 and 2091, giving access to a court, is slightly higher, 1.9 m. The Phase iii doorway from that court into the court east of 2097, as measured in 1990, was also 1.9 m above the present ground level. External doorways thus seem to have been higher than those leading into a roofed space.

No exterior roofing of the mastaba body is preserved in these chapels, although facing blocks often extend higher than the chapel ceiling. There were no fallen architectural elements readily identifiable as cornices or roofing stones. However, if the mastabas were roofed in stone, the roofing blocks would have been the most accessible to scavengers, and would have been the first to be removed for reuse. At least one mastaba, 2089, appears to have been unroofed during the later phases of the construction of the cemetery, since a support wall for an adjacent mastaba was built over it at a level below the top of its chapel walls. (It may be, of course, that the mastaba was re-roofed after the construction of the wall, and that the roofing material was again removed later.) Mastabas may have normally been left unroofed; this would have left the location of shafts apparent from above, but so long as the mastaba facing survived, the tops of mastabas were relatively inaccessible. (There is no evidence of stairs in the cluster.)

*Flooring of chapels.* Only one chapel has a surviving masonry floor, 2097. This floor is of limestone, and irregular in pattern. Like the walls surrounding it, its surface was clearly cut down after being laid in place, since the join between the wall and the floor rarely occurs at the angle. The floor was laid in large, rough blocks, smoothed from wear, with a staggered bond. The size of the blocks is comparable to the adjacent wall blocks, on the order of 60 x 50 cm. A small clearance adjacent to the door exposed part of the side of a paving block, which was at least 20 cm deep. The joins between the paving blocks are about .5 cm wide, and are uniformly filled with gypsum.<sup>20</sup>

When a floor such as that found in 2097 was removed from a tomb, the angle between the floor and the wall often left a “scar,” in the form of a protruding unfinished level of wall block. Such a scar is clear on the western wall of the blocked southern corridor of

2092+2093. In other cases, where a change in the finish of the stone coincides with a new course, it is difficult to tell whether a floor has been removed or whether the lowest course has just been left unfinished to form a “baseboard” for aesthetic or practical reasons. In at least two mastabas (2096 and 2097) the lowest courses were quite clearly left rough intentionally, perhaps to emphasize a more finely finished surface higher on the wall.

According to Reisner's *Giza Manuscript*,<sup>21</sup> the floor of 2091's chapel was not of stone but of packed limestone debris, to a depth of 12.5 cm the east and 25 cm on the west, leveling a downward slope of the bedrock towards the west. (See the cross-section of this chapel in pl. 136.) The Reis's Diary also notes a “limestone floor debris,” in the chapel of 2094, perhaps the same sort of packed limestone debris described in 2091. Since he describes it as being “above the red rock,” and the floor does not seem significantly higher than the bedrock on the section drawn from Floroff's measurements, it was presumably removed during the clearance of the mastaba. This packed limestone debris is also noted in several other mastaba chapels and serdabs, for example, the courtyard of 2097 and the serdab floor of 2240. It seems always to have been removed by the excavators, since the underlying bedrock is normally mentioned in the same sentence. In the chapel of 2240, a mud floor, overlying the limestone, was recorded. It was apparently also removed.

The use of brick flooring for the exterior passage between 2091 and 2092 is recorded in the excavation notes of the Reis. The notes, dated August 7, 1936, read: “g 2091: In the street west of this mastaba, between it and 2092. Limestone debris, drift sand, rubble, pebble and big stones fall[en] in the street. The street is cleared on N on a mud-brick floor on the top of bad rock mixed with pebble.”<sup>22</sup> Since the material beneath the floor is described, the floor was presumably removed. No trace of brick remains today in this passage, and there are no changes in the finish of the adjacent walls that might indicate a rougher finish beneath floor level. This brick floor was probably built after the completion of the adjacent mastabas, most likely during Phase ii, when the passage was one of the few routes of access to the tombs south of the cluster.

## Subterranean Architecture and Burials

Subterranean shafts with burial chambers were dug into most mastabas. It would have been difficult, if not impossible, to dig very far into the bedrock from the bottom of a pit dug through mastaba fill, because the impact necessary to break the bedrock could be expected to bring the walls that retained the mastaba fill down upon the workers. Therefore, shafts that penetrate the bedrock more than a few centimeters can reasonably be assumed to have been built before the body of the mastaba. The shafts that end at the rock surface could have been dug through the top of the mastaba massif after construction was complete, although they may equally well have been contemporary with the mastaba construction. (The many shafts in the

<sup>19</sup> This measurement and those that follow are based on the measurements made by A. Floroff in June of 1937. I have rounded the numbers to the nearest 10 cm.

<sup>20</sup> This description is taken, largely verbatim, from the 1990 field notes of Jeffrey Burden, p. 18.

<sup>21</sup> Chapter “L,” p. 142.

<sup>22</sup> This section appears to refer to the northern part of the passage itself, rather than the courtyard north of it or the passage between 2097' and 2098 on the north side of 2091, since both of these areas were cleared only later.

cluster that appeared not to have been used would argue for such advance preparation. If shafts were dug for specific burials, one would expect them to be used.)

The stone retaining walls that lined the shafts were normally constructed directly on the bedrock. Principal shafts were usually lined with well constructed masonry, whereas the later shafts, ending above the surface of the bedrock, were more commonly lined with rubble and mud conglomerate ("dubsh," in the notes). Even in rubble-built shafts, however, larger slabs were used for roofing chambers. Shafts lined with mud brick walls are rare; they are presently indicated only by dark areas on the surface, and are too weathered to allow the determination of the dimensions of the bricks or the way in which they were laid. Their chambers are generally stone-built rather than constructed of brick, perhaps because brick walls would not support the weight of the roof and the overlying mastaba massif. The walls of masonry shafts and the subterranean walls of all shafts often show footholds (or possibly holes to support an interior scaffolding) on all four faces (see fig. 2). Some shafts also show red paint marks.

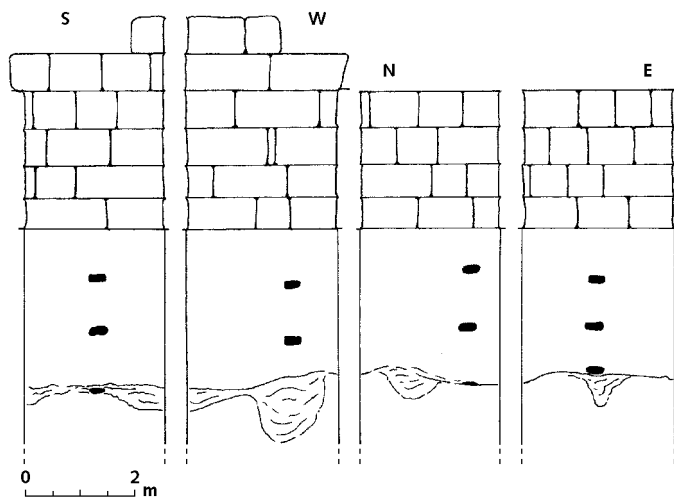


Fig. 2. Measured drawing of the upper part of shaft 2093 a, showing depressions for footholds or possibly scaffolding.

With one exception, the chamber opening off the shaft remains in or under the mastaba massif, even when the chamber is deep in the bedrock. Occasionally chambers extend under adjacent mastabas as well, but there seems to have been a prejudice against placing a burial chamber under an area where there was no covering masonry and where people would walk. The one exception, the chamber of 2088 a, extends under the chapel, with the axis of the burial pit running directly under the west wall. The depth of the shaft may have led to a miscalculation, or it may be that the position directly under the false doors had some other significance.<sup>23</sup>

A peculiarity of the principal shaft seems to have been its relative isolation from secondary shafts, a spatial separation between burial chambers that may reflect the wealth or class of their occupants. In

<sup>23</sup> It is possible that the shaft was more angled than the Tomb Card indicates, so the chamber did not extend quite so far to the east, but it must have been at least partially under the chapel. No error in recording the orientation of the shaft on the Tomb Card is likely, since if the chamber opened to the west it would extend under the path between 2088 and 2089, an even more unlikely position; the orientation of the burial pit precludes a northern or southern chamber.

the largest mastabas (2088, 2089, 2091, 2093, 2094, 2097, 2098, and 2240), the principal shaft is isolated in the southern part of the mastaba, while the secondary shafts tend to cluster thickly at the north. (Interestingly, this isolation only seems to apply to the entrances of the principal shafts; their chambers are often quite close to, or even overlap, those of secondary shafts, perhaps because their subterranean depth was seen as a sufficient barrier.) The distance may reflect some sort of taboo, or perhaps a need for greater private space attributed to the officials who were the builders of these tombs.

There are normally not many secondary shafts in major mastabas, suggesting that the owner provided burial only for his immediate family.<sup>24</sup> Although evidence about family members from chapel iconography may be incomplete, there are some interesting correspondences. The chapel of 2086 depicts Redi, his wife, and two children; his tomb has four shafts. The chapel of 2097 depicts only the tomb owner and an anonymous boy, and the mastaba has only a single principal shaft. Mastaba 2091 depicts Kapi and Khamer-ernebty and their three daughters, along with several of Kapi's brothers and sisters. Although the mastaba itself has only four shafts, one daughter (Tjezet) was probably buried behind the false door bearing that name in 2097', directly to the north; this would leave enough shafts for Kapi's immediate family in 2091; his brother and sisters may have also been buried in 2097'. On the other hand, there are only two shafts in 2240, although a son (possibly two sons) and at least one daughter are depicted in the tomb decoration, implying the existence of a wife, although she does not seem to have been shown in the decoration. The explanation here may also be that some family members were buried in other tombs, and that this was already known when the tomb of the paterfamilias was planned. The opposite situation, in which fewer family members than anticipated made use of the family mastaba, is perhaps to be seen in the complex of 2092+2093+2096, where all seven shafts in the secondary mastabas 2092 and 2096 apparently remained unused.

Mastaba extensions were presumably built to allow for the burial of dependents and more distant relatives. Perhaps because there was no area of restricted placement, secondary mastabas with no clear principal shaft tend to have many more shafts than principal independent mastabas. g 2084 has seven; 2095 has nine; and 2231 has ten. Smaller subsidiary mastabas, 2096 and 2095', have only three or four shafts, but they are densely packed. Independent mastabas tend to have three to five shafts. The single exception, 2098, has nine shafts, but six of them are clustered at the far north end of the mastaba, some distance from the other three shafts, which may imply a conceptually distinct area.

The dating of the secondary shafts is problematic, and must be based on the form of the shaft itself and the contents of the burial. Reisner was of the opinion that most secondary shafts dated to the Sixth Dynasty; however, it is worth noting that although these shafts are very densely packed, in only one case (2095 b) does a later construction cut into an earlier one. Chambers seem always to be

<sup>24</sup> This distribution may again be a reflection of residential patterns. The limited extent of Egyptian kinship terms and other textual evidence has been used to argue for nuclear family households in Old Kingdom Egypt, at least as an ideal; cf. B.G. Trigger, *Early Civilizations: Ancient Egypt in Context* (Cairo, 1993), pp. 35–36.

positioned so as to avoid neighboring constructions, sometimes by a very narrow margin, despite the fact that these earlier chambers would often have been closed and inaccessible. This circumstance suggests two possible explanations: either very detailed records were kept of the exact position of the chambers buried in the body of each mastaba, or, more likely, the secondary shafts were all constructed over a very short period of time, possibly even simultaneously with the mastaba massif. This latter possibility seems especially likely for mastaba extensions, where the shafts are very densely distributed; it is certainly the case in 2096 and 2097', where pairs of burial chambers were constructed directly under serdab chambers.

Burial chambers are normally single rooms with rectangular burial pits or rectangular stone or wooden coffins. The largest chambers tend to be subterranean, although well-built chambers in the body of the mastaba, lined with masonry or rubble walls and roofed with slabs, also existed. Builders of secondary shafts tended to make use of existing masonry by positioning their shafts along the outer facades of mastabas buried by later construction. Other shafts were located in the corridors between mastabas, where the burial chamber could be created by wedging a slab between the battered or stepped walls, building the end wall and the shaft with rubble walls, and then filling in the corridor. Serdabs could also be used for burials, and in 2089, an entire chapel was taken over for this purpose. Most of these intrusive burials were comparatively sterile, so it is difficult to determine at what period they were built. Some shafts had no chambers at all. It may be that a chamber would have been constructed when the shaft was used for burial; or the shaft's occupant may simply have been placed at the bottom of the shaft, sheltered by a few slabs, as was the case in several occupied tombs.

The entrance to the burial chamber could be blocked either by a single slab leaning over the opening, or by a wall in the same position. Frequently the walls built to block the entrance lean at the same angle as a slab would have done. This suggests that the leaning slab was the original method of closing the tomb and the wall was a substitute. The walls could be built of masonry, rubble, loosely piled debris, or a combination of these elements. They were often chinked and faced with mud plaster.

The interment of the dead also varied widely. The majority of the dead seem to have simply been laid in their burial chambers, with few or no grave goods. This paucity of grave goods makes it likely that the emptiness of many small shafts is not the result of robbery, but is due to the fact that they were never used. The position of the body is most often extended in the principal burials, and contracted to varying degrees in the secondary ones. The head normally lies to the north and faces east, even in the extended burials. There are only two exceptions to this orientation, 2098 b and 2095 E(ii). Both of these bodies are contracted, with their heads to the west and their faces to the south. Both burials apparently are those of adults, the latter probably a young adult, and the former of an older individual.<sup>25</sup>

<sup>25</sup> The excavators identified the occupant of 2095 e(ii) as a child. However, on the basis of her examination of the excavation photograph, Allison Webb-Willcox suggested that the body was that of a young adult, a view supported by the indications of visible wear on the teeth. The occupant of 2098 b was skeletally adult and showed significant tooth wear.

Preparation of the bodies apparently included both wrapping in cloth and, in one case, coating of the face and body with a layer of plaster that was then sculpted. Some bodies seem to have received no treatment at all. Most bodies, as they appear in the excavation photographs and in the drawings on the Tomb Cards, appear to have been reduced to skeletons. The flesh had presumably decayed, or may have been removed before burial.<sup>26</sup> A few bodies were simply bundled into small cloth-wrapped packets, in order to fit into very small spaces. Coffins of wood or stone and burial pits occur only in the principal shafts, although in some cases secondary burials seem to have been placed, contracted, in wooden boxes. One circumstance not noted in the records, but apparent in many of the excavation photographs, is a stone "pillow" placed under the head of the deceased. This practice appears to be most common in burials with no coffin or other grave goods.

One curious characteristic of the shafts is the great variation that can be seen in the contents of their fill, even in adjacent shafts, as recorded in the Reis's Diary. These variations may offer clues to the subsequent history of the cemetery and the robbery of some burials. This analysis has not been attempted here, but the contents of the fill, as recorded by the Reis, is given in the "excavation" section for each mastaba.

## Placement of Decoration

It is difficult to compare the extent and distribution of decoration in the mastabas because the preservation of the decoration is incomplete. Even when a wall is well preserved, and appears to be undecorated, it may once have been decorated in paint rather than painted relief. In general, if any of the walls of a chapel were decorated, they all seem to have been. There are two exceptions to this pattern. In the L-shaped chapel of 2088, the north and south end walls seem not to have been decorated; and in 2098, there is part of an offering list on the west wall of the corridor just south of its recessed chapel, but no other decoration in its corridor. Changes in chapels that involved new walls and appropriation of previously exterior space were accompanied by decoration in some cases (the corridors of 2091 and 2092+2093), but were not in others (2086).

The most consistently decorated elements were doorjambs. With one exception, these depicted the tomb owner striding out of the tomb, often accompanied by a child. The exception is the jamb of the doorway to the courtyard added to 2088, where the tomb owner's son, who presumably built this addition, is shown entering his father's chapel (the facing jamb has been lost). Interestingly, mastaba facades and porticoes flanking the main entrance do not seem to have been decorated, although the pillars of two porticoes (2088 and 2240) bore sunk-relief figures of the tomb owner. The smoothing of the surface and a red ground line on the facade of 2086 suggest that a decorated entrance was planned, but not completed. The figure of a man on the northern back wall of the portico of 2088, like the false door on the southern wall, was not part of a decorated entrance but probably dates to the conversion of that area to an interior space by

<sup>26</sup> This technique is described and the evidence for it is discussed in A.J. Spencer, *Death in Ancient Egypt* (Harmondsworth, 1982), pp. 41-43.



the tomb owner's son. Like the figure on the doorjamb, the man shown is facing into the inner chapel. The exterior facade was recessed around the doorway in only two mastabas, 2088 and 2230, and in both cases the recesses were filled in when the entrance was converted to an internal door by later construction.

A characteristic of mastaba decoration that has not been much noted previously is the height of the lowest register of carved decoration above the floor. In this cluster, the height varies considerably within individual tombs as well as between them. False doors and palace facade niching generally extend to floor level (or to the top of an adjacent offering slab), regardless of the height of the wall decoration. Pilasters flanking a recessed chapel tend to have baselines at the same height as the adjacent chapel walls, while doorjamb have a lower baseline and pillars have a higher one. The measurements of the decoration above the ground level are summarized in fig. 3. These groundlines affect the quantity of wall decoration, since the nearer the floor the lowest register begins, the greater was the ratio of the total area of surface decoration per linear meter of wall.

2086:	0.46 m (all chapel walls) 0.12 m (recess) 0.5 m (pilasters)
2087:	0.36 m (east doorjamb in 1994) 0.10 m (west doorjamb in 1994)
2088:	0.84 m (east and west walls in 1994) 1.22 m (pillars of portico in 1994) 0.60 m (figure on portico in 1994)
2091:	0.98 m (north wall of recess) 0.97 m (south wall of recess) 1.02 m (east corridor) 0.99 m (west corridor) 0.85 m (pilasters) 0.95–8 (pilasters of recess) 1.10 m (column)
2092+2093:	0.68 m (doorjambs in 1994) 1.00 m (east and west walls, above north doorsill in 1994) 0.63 m (west wall, south end, above "bench")
2097:	0.63 m (all walls in 1994)
2098:	0.21 m (west wall between false doors; north wall) 0.25 m (column faces, 1987)
2240:	0.88 m (west wall at south end, 1989) 0.65–69 m (doorjambs)

Fig. 3. The heights of the base of carved decoration above the floors of the chapels. (The measurements date to 1990 unless another date is noted.)

In general, larger chapels decorated during the Old Kingdom tend to have a dado, often about a meter in height, painted black, with two horizontal bands, each about 10 cm wide, near the top. The upper band is red, the lower one is yellow. Narrower black bands, 1–2 cm wide, separate them from each other and from the base of the figurative decoration. Such a dado is attested in only two tombs in this cluster. An 8-cm-wide red border under the scenes on the north section of the west wall of 2240 was noted in 1990, and excavation photographs show a similar band on the south section. In

2092+2093, the excavation photographs of the threshing scene on the east wall show clearly the red band beneath the carved decoration. Presumably both these tombs had a yellow band below the red. The base of decoration was roughly 1 m above the floor in 2092+2093 (the floor is lost); and in 2240 it is about .9 m high. The baselines in 2091 and 2088 are also almost a meter above the floor, so they presumably had such dados as well. The height of the doorjambs in 2091, 2092+2093, and 2240 are all 10–15 cm lower than the adjacent walls, perhaps so that their bases are level with the base of the dado.

In 2086, a narrow band of red paint ran below the lowest register of carved decoration, presumably an alternative to the black dado with red and yellow bands. The base of the decoration is lower in this tomb, only about .50 m above the floor. This single border line may also have been used in other tombs where the decoration extended too low on the wall to allow for a dado. These include 2097, 2086, and 2098.

## Techniques of Decoration

The surviving decoration in the mastabas is mostly carved in raised relief. Two different techniques were used for the carving of this decoration, depending largely on the quality of the underlying stone.

Most chapel walls were of poor-quality limestone, unsuitable for carving. These walls were entirely covered with a 5–10 mm thick layer of plaster, then coated with a thinner surface of finer white plaster, into which the decoration was carved. This carving was often done while the plaster was still partly wet.<sup>27</sup> This technique, in which the carving is almost entirely in the plaster itself, preserves the decoration and its modelling and fine details better, but only as long as the plaster remains attached to the walls. When it becomes detached, most of the decoration is lost, and only the deepest cuts of the sculptor's chisel remain. This technique was used in 2086, on the east wall of 2088, in the corridor of 2091, on the east wall of 2092+2093, on the north and south walls of 2098, and on all walls but the west wall in 2240.

On chapel walls built of harder stone, and on architectural elements, such as pillars, architraves, lintels and doorjambs, decoration was carved directly into the limestone, although the gaps between blocks were often filled with plaster and decorated using the same technique used to decorate poorer stone. The harder stone surfaces were also generally smoothed with a film of plaster that would have served as a base for paint. In some cases, this plaster film seems to have been applied after the decoration was carved, to smooth out any mistakes in the carving as well as flaws in the stone. The reliefs carved using this technique tend to be pitted and weathered, although the basic outline survives the loss of the plaster better than plaster-cut decoration. Paint, modelling, and lightly-incised details are usually entirely gone. Decoration was carved directly into the stone walls throughout 2097, on the west wall of 2088, on the three walls of the recessed chapel of 2091, on the western walls of 2092+2093, on the west wall of 2098, and the west wall of 2240. In addition, architectural elements such as pillars and doorjambs, which were made of

<sup>27</sup> This suggestion was made by P. Hatchfield, who repaired much of this plaster decoration during the 1989 season.

better stone for structural reasons, are uniformly decorated using this technique.

There was a clear tendency to use better stone, into which decoration could be carved directly, on the west walls. This practice may result from several circumstances. Since the false door was located there, the whole wall may have been built of a more durable stone. In some cases, also, this wall was the most visible from outside the tomb, where any cost-cutting use of plaster would have been the most conspicuous, while the side walls and the east wall would be noticed by the visitor only on the way out. In the case of the corridor of 2091 and the east wall of 2092+2093, the walls were decorated later, and the plaster-cut decoration may reflect different economic resources (or different incentives to invest them) in later periods.

In addition to the prevailing raised relief carving, some decoration in the cluster was carved in sunk relief. This includes all the exterior architraves and pillars, and the false door in 2092a. Various names, perhaps added later, were carved in sunk relief on parts of in 2088 and 2091 which were otherwise decorated with raised relief. Unfinished sunk relief decoration can be seen on the drum lintel of 2092+2093. The unfinished figure on the southern doorjamb of 2230+2231 was probably intended to be in raised relief, although only a single cut in the stone was made.

The relief decoration in these mastabas was almost certainly entirely painted. Paint survived only partially in 2092, 2086, 2098, and 2240. Whether the undecorated mastabas were originally decorated in paint cannot now be determined, but it is likely that they were.

## Chapter 2: HISTORY AND DATING OF THE CLUSTER

The sequence of construction of the cluster is an essential prerequisite to the analyses of its spatial organization and the factors that influenced the forms of the tombs. In addition, it provides information about the activities and preferences of tomb builders at the site and furnishes an example of cemetery growth. In this chapter, the relative sequence of construction and reconstructions of the tombs are established first, based on their architectural relationships and orientation. The decorated tombs are then assigned dates in terms of kings' reigns, based on features in their decoration and inscriptions, and the relative sequence can be used to narrow these ranges and to date the undecorated tombs.

### The Sequence of Mastaba Construction

Reisner ordered these tombs based on his assumption that "mastabas of independent site" were built first, and then subsidiary mastabas were built around them. Dates of the individual mastabas were based on the types of their chapels and shafts. He argued that the presence of his chapel types (4), (5), (8), (9), (10), and (11) in this cluster indicated a date range from the late Fifth through the Sixth Dynasties.<sup>1</sup> The prevalence of shaft type (8) in this cluster, he suggested, meant that most secondary shafts were built during the Sixth Dynasty.<sup>2</sup> However, the fact that the secondary shafts seem to have fit so well together within the mastabas without overlapping suggests that they were all built within a comparatively short period, probably no more than a generation after the construction of the mastaba they occupied. One secondary shaft, 2097' f, can be shown to predate a change that occurred well before the end of construction in the cemetery. Reisner's shaft typology seems as likely to represent economic differences as chronological developments, and is in any case not very exact.

Aside from the two obvious additions to 2088, the only changes in the cemetery that Reisner discussed were the construction of additional mastabas and secondary shafts. He did not consider the possibility that finished mastabas were modified after their comple-

tion. This narrow view obscured many important changes, including changes in the placement of doors and walls, changes in the original mastaba to accommodate the building of extensions and additions, facing of earlier walls and doorway revetments, and the reuse of architectural elements in later constructions. Like New Kingdom temples, the tombs in this cluster seem to have changed by growing outwards, expanding their area with corridors, porticoes, and courtyards.

Consideration of these changes, in conjunction with the basic pattern of bonds between buildings and parts of buildings, yielded a rough sequence of constructional events. When this sequence was reduced to its most compact form, a distinctive pattern was noted. The earliest tombs have entrances oriented to the south and east. They are arranged in a single line along the path south of the cluster, the path that leads west from the Khufu pyramid enclosure and cemetery 2100, past the north side of mastaba g 2000, and into the western half of the western cemetery. This path was obviously a well-travelled route, and the all of the earliest tombs were oriented to the southeast, in order to attract the attention of people walking along it.

These tombs, and their successors with the same southeastern orientation, were designated Phase i. Many later tombs, however, have entrances oriented toward the north. These tombs are often built away from the path, abutting the north faces of the Phase i tombs. Moreover, many Phase i tombs were modified after their completion to allow entrance from the north, and to cut off the southern approach. These circumstances suggest a second period, Phase ii, that was characterized by the rerouting of foot traffic from the earlier path to a new path along the northern edge of the cluster. The latest tombs show a return to the earlier orientation, which suggests that the southeastern path again became the primary avenue of approach. These tombs belong to Phase iii, as do the modifications made to Phase ii tombs to adapt them to a southern approach.

The uniformity of these changes in orientation across the cluster establishes that the sequence was, in fact, compact. Moreover, these cemetery-wide changes in orientation explain why so many alterations were made in the mastabas after their initial construction. (There is no obvious explanation for the reorientation itself, however.) The recognition of these shifts allows the major tombs and their modifications to be assigned to one of the three phases even where they do not abut other tombs in the cluster, and it allows groups of contiguous tombs to be correlated chronologically.

One of the principal assumptions in ordering these tombs within contiguous groups is that the tombs and the chapel entrances were placed and oriented to capture the attention of passersby and entice them into the chapel where they might make an offering. This desire to attract casual visitors into a tomb is well attested in the Old Kingdom, when invitations to visitors, called "calls upon the living," were often inscribed on a tomb's entrance, addressed to anyone who might walk by it. These texts hint at the advantages to be gained by making an offering to the spirit of a person who had been powerful and virtuous during life, and the dire consequences of damaging the tomb and its chapel decoration. In addition to the physical placement of the tomb and chapel entrance, other strategies for attracting visitors included the placement of decoration within the chapel, where the

<sup>1</sup> Reisner, *Giza Manuscript*, Chapter "L," p. 11. "Chapels of type (4) should be dated to Dyn. V. The chapels of type (10) and (11) should be dated from the latter half of Dyn. V to the end of Dyn. VI. The chapels of type (5), (8), and (9) could be dated to any part of Dyns. V-VI." (Note that these typological datings are all consistent with the late Fifth Dynasty date that I have assigned the mastabas.)

<sup>2</sup> *Ibid.* The date range for all the types represented, however, was the late Fifth through the Sixth Dynasties.

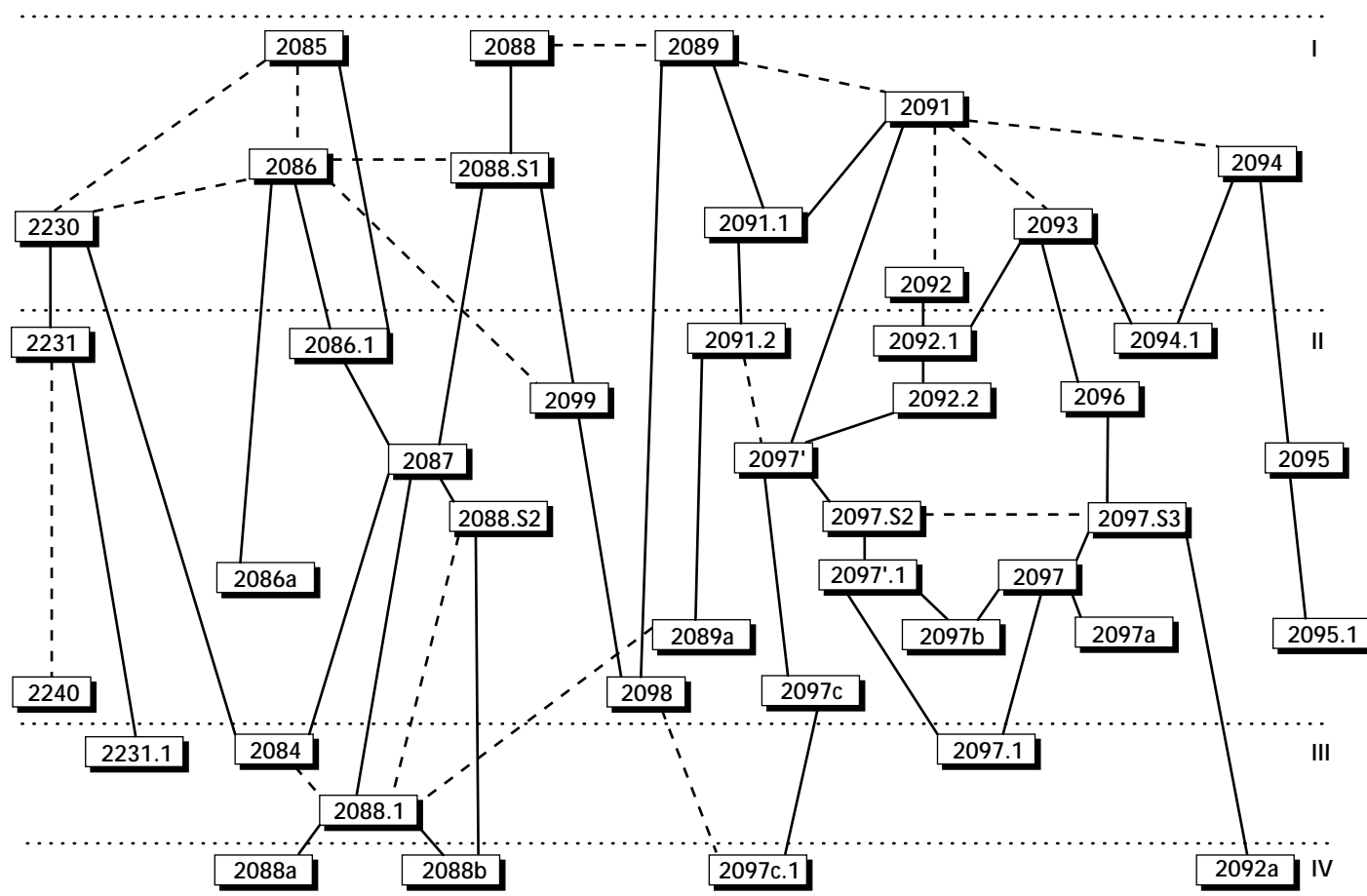


Fig. 4. The chronological relationship of the mastabas. Solid lines indicate architectural abutments; dashed lines indicate other connections. Generally, eastern mastabas are placed to the left, western mastabas are placed to the right.

decoration visible from the door is generally the best and the most interesting in the tomb. Relief decoration that was visible only as the visitor was leaving the chapel was often of an inferior quality. The prominent placement of the titles of the tomb owner, which indicated the level of influence that could be used to benefit a visitor who said an offering formula (and to punish a more destructive visitor) is more evidence of the importance of casual visitors.

As a result of this phenomenon, the orientation of tombs can be used to date tombs relatively within the three phases. It is unlikely that any tomb owner should have intentionally sited a tomb or chapel entrance where it was not easily visible and accessible to visitors. If one tomb's access to the path is obscured by the location of another, then the tomb with better access can generally be assumed to be of later date.

The alignments of walls and facades can also offer clues to the state existing at the time of a tomb's construction. When walls or corners of several mastabas are aligned, it is likely that any intervening construction that blocks or obscures the alignment occurred later. However this criterion is not always dependable. In some cases the builders of separated tombs may have laid them out using the same easily visible points as landmarks. The frequent use of the same landmarks would in effect have created a grid across the cemetery. The use of such points would explain how tombs could be similarly

aligned despite intervening structures that were not oriented using these points.<sup>3</sup> The northern line, running between the north faces of 2097', 2231, and 2240, is roughly parallel to the line running along the north faces of 2092, 2093, and 2094, and the south face of 2230; and also to the line running along the southern faces of 2092, 2093, and 2094, which in turn parallels the north face of g 2000.<sup>4</sup>

Following the three phases suggested by the two changes in the orientation of the cemetery, a fourth group of smaller tombs can be identified. The tombs of Phase iv are distinctive because they obstruct access to the cult places of earlier tomb chapels. Encroachments of this kind seem to have been carefully avoided by the builders of earlier tombs, who always left access open to earlier cult places, although they sometimes made such access less visible. These new tombs mark a lapse of the control previously exercised over the cemetery, whether by law or simply by custom.

The chronological relationships of the tombs in this cluster that are revealed by this analysis are summarized in fig. 4. This sequence is not linear but forms a matrix. The iconographic evidence, which suggests that the development of the cluster took place almost

<sup>3</sup> Such tombs may have been oriented using a different set of points.

<sup>4</sup> That these lines all diverge slightly towards the south, and to about the same degree, may be due to a consistent error in Floroff's measurements. This could not be confirmed without making an entirely new plan of the cluster, for which permission was not granted.

entirely during the last few reigns of the Fifth Dynasty, indicates that the periods of construction of the tombs was comparatively short. At least one tomb built early in the first phase, g 2088, was extensively modified by the son of the owner during the third phase, suggesting that the first three phases fit within two generations. Other remodelings, for example the alterations to g 2091 (2091.1 and 2091.2), probably fell within the lifetime of the original tomb owner. The grounds for the relationships recorded in the matrix are described in the following summary of the development of the cluster.

### Phase i

During the first building phase of the cluster, most tombs were built along the path to the northeast corner of g 2000. Passersby were attracted into tombs largely by the placement of the tomb itself, of its chapel, and of false doors and other decoration. In several cases, the tomb and its chapel were sited so that an unwary pedestrian, walking past tombs to the east, would be led directly into the chapel and up to the false door. Other tombs were positioned to entice the potential visitor with their most impressive display of decoration.

The visitors for whom these tomb owners were vying presumably were making for one of two destinations: either the part of the Western Cemetery that lay to the west of g 2000 or the northern niche of g 2000 itself. The path around g 2000 was undoubtedly

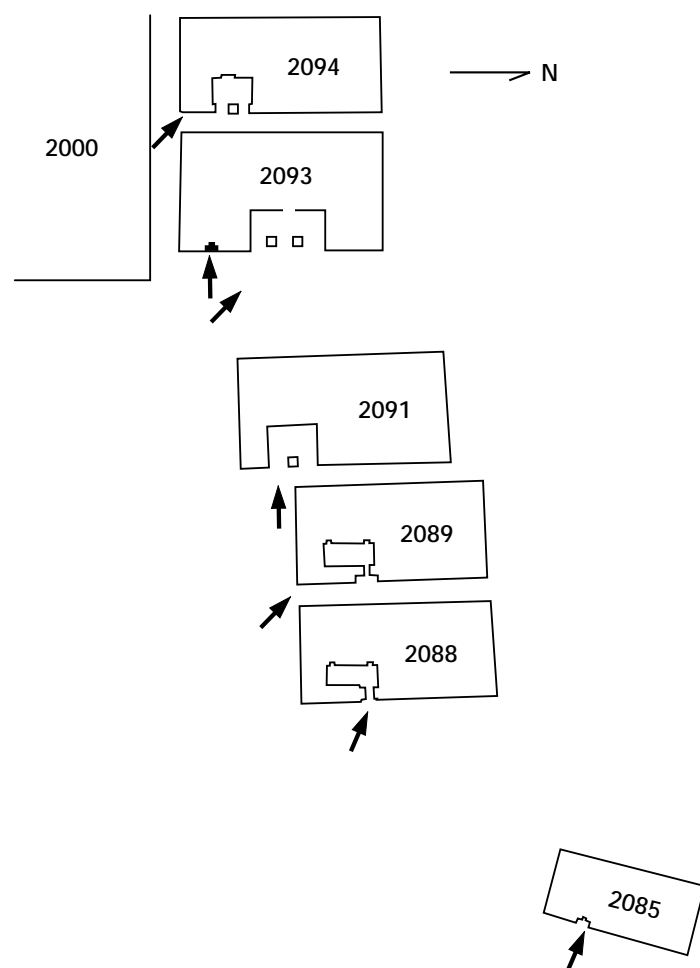


Fig. 5. Construction during the early part of Phase i.

much used, as it is even today; the significance of the northern offering place of the mastaba, and what was done there, is less certain. The direction from which these passersby seemed to be coming was the east and northeast, either through the mastaba fields immediately west of the Great Pyramid, or up the slope onto the plateau from the northeast.

*2085* seems to have been one of the first tombs built in the cluster. It is the smallest mastaba on an independent site and its orientation is unrelated to that of mastaba 2000. Its simple plan and its stepped siding also suggest an early date. The height of its false door lintel seems to indicate that it is stratigraphically lower than the surrounding tombs (see pl. 13). It is unique in the cluster in having four principal shafts of approximately equal depth. Although the mastaba is comparatively small and simple, these shafts are deeper than all but those of the most elaborate tombs in the cluster. This apparently communal and egalitarian use of the mastaba suggests that its owners might have belonged to a different social class than the other tomb owners. It may have predated the adoption of the area by the *hntjw-š pr-ꜥ*, or alternatively, dated to a period when the holders of that office had fewer resources.

*2088 and 2089* share approximately the same orientation, plan, and dimensions, although no serdab was found in 2088. Like 2085, both of these mastabas have stepped facings. The early date of these two tombs is also suggested by the fact that many other mastabas in the cluster are architecturally dependent upon them or are oriented with respect to them. (See also the discussion of 2230 below.)

The owners of both mastabas hold the title *šꜥd hntjw-š pr-ꜥ*, “inspector of palace attendants,” and the tombs seem likely to have been built at the same time. g 2088, the more accessible of the two tombs may have belonged to a wealthier or more influential man, since it was decorated in raised relief and shows evidence of later additions. In contrast, the chapel of 2089 was decorated only in paint, if it was decorated at all. (The owner’s name and title is known from an ink inscription on some of his burial equipment.) g 2089 was also treated with much less respect in later phases. Early in Phase ii, the owner of the mastaba to its west removed its upper courses and built an eastern extension to his mastaba over it; and in Phase iv, its chapel was converted to a burial shaft, and three more burial shafts were constructed in the passage leading to its door.

*2091* was originally a rectangular mastaba with a recessed chapel supported by a single pillar. The facade was battered rather than stepped. Most of its decoration probably belongs to a later phase. The tomb owner held the same title as the owners of 2088 and 2089, *šꜥd hntjw-š pr-ꜥ*, “inspector of palace attendants,” but he ultimately became an *jmj-r st hntjw-š pr-ꜥ*, “assistant overseer of palace attendants.” He may have held some higher offices already when his mastaba was built, since even in its original form his tomb is larger than 2088 and 2089. g 2091 is not aligned with 2088 and 2089, but extends out to the south of them; and the south face of its central pillar and serdab slot are aligned with their south faces. This effort to be

visible and accessible to visitors walking past these two tombs makes it likely that they were earlier.

*2094*'s recessed chapel and its single pillar bear roughly the same relationship to the south wall of *2091* as that tomb's chapel and pillar do to the south walls of *2088* and *2089*. The central axis of the chapel of *2094* is different, however, since the mastaba is aligned with g 2000, and the serdab slot is to the north. The space between *2094* and the west face of *2091* also makes their relationship less clear. All the exterior faces of the mastaba, including its eastern facade, are stepped, usually an early feature.

*2093* obscures not only the relationship between *2091* and *2094* but the entrance to *2094*, so it was presumably built later than both. Moreover, had it been built before *2094*, it would probably have been built directly west of *2091*. Like both adjacent mastabas, it had a recessed chapel, though probably with two pillars rather than one. To increase its visibility, the mastaba extended south of its eastern neighbor, *2091*, although its chapel did not (the central axes of the chapels of *2093* and *2091* are almost exactly aligned). Instead, the false door was set into the south end of the facade to draw the notice of passers-by. This false door was clearly part of the original plan of the mastaba because of the position of the principal shaft behind it. Like all early mastabas except *2091*, *2093* has stepped facing on its three exterior facades. Its eastern facade may also have been stepped originally.

*2088.S1* was the first contiguous extension of *2088*, consisting of a serdab along the northern part of the west face of the building and a spur wall of the same depth extending the southern face of the mastaba to the east. Together, this spur wall and the serdab created a recess for a new pillared portico at the entrance to the original chapel.<sup>5</sup> All exterior faces of the extension were of stepped masonry. The northeast corner of the new serdab meets the southwest corner of *2086*, but since the portico of *2088* is standard depth (almost identical to that built under unconstrained circumstances in front of *2240*), *2086* is unlikely to have been the earlier of the two constructions. It is possible that the tombs were built at the same time and the tomb owners negotiated the intersecting corner.

*2086* was built a corridor-width west of *2085* and shares its angle of orientation. It extends south of *2085*, however, and the entrance to its chapel was in the exposed southern end of its east facade. The battered eastern facade is finished to a smooth surface on the south, while on the north it was left rough; the border between the two areas is an angled line that roughly parallels the angle of *2085*'s stepped southern face. g *2086* thus clearly postdates *2085*. Because of the way the facade is finished, the builder apparently expected

<sup>5</sup> Reisner considered the serdab a secondary construction in what he believed was originally a closed corridor added north of the portico, leading behind *2086*. Were he correct, the intermediate appearance of the mastaba would be very strange; the eastern wall of the proposed corridor would have been attached to the mastaba only by doorways at either end. Moreover, there is no necessity for such a complicated reconstruction, since the end walls of the serdab are bonded with the east wall. The reconstruction may have been based on an assumption that both serdabs were added at the same time. In any case, it is probably incorrect.

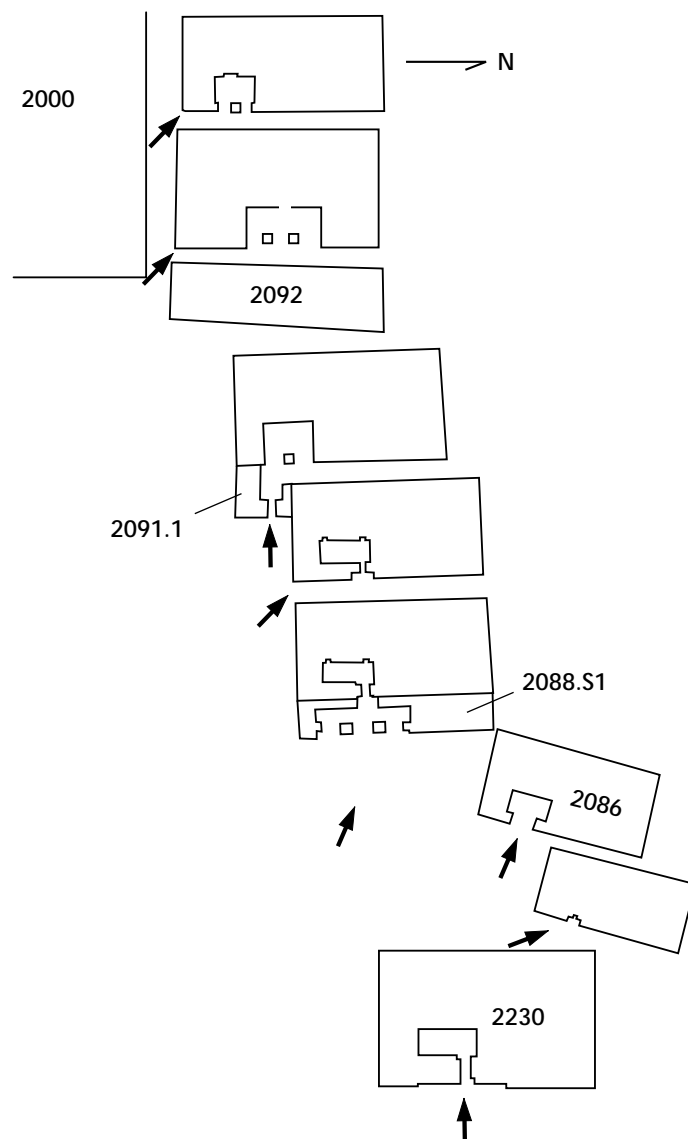


Fig. 6. Construction during the later part of Phase i.

visitors to approach from the east along the southern facade of *2085*. Since *2230* would have obstructed this direction of access, *2086* was probably built before *2230*.

*2230* has an L-shaped chapel like those of *2088* and *2089*, but it was faced with battered walls of unusually large blocks (w-masonry), many of which were never finished. The south facade of this mastaba aligns with the north facades of *2093* and *2094*,<sup>6</sup> which might be used to argue that these three tombs predate the intervening tombs, *2088*, *2089*, and *2091*, which would have obscured this line. However, this alternate chronology is improbable because of the relationship between *2091*, *2094*, and *2093* outlined above. These alignments may simply have resulted from the builders' use of the same exterior

<sup>6</sup> The alignment of these facades is shared by the north face of g *2220* to the east, the second largest mastaba in the Western Cemetery, after g *2000*. Unfortunately, the owner of this mastaba, like the owner of g *2000*, is unknown. He is depicted with his wife in an unfinished scene in the chapel, but he was apparently not buried in the mastaba, since the only burial chamber, found intact, contained the body of a woman. S. D'Auria et al., eds., *Mummies and Magic: The Funerary Arts of Ancient Egypt* (Boston, 1988), pp. 76–77. Any connection he might have had with the mastabas of the cluster is thus unrecoverable.

points for orientation. While the mastaba thus post-dates the earliest mastabas of Phase i, it is difficult to determine how much later it is, since it was at the easternmost end of the cluster. The fact that 2231 was built to give the tomb a northern entrance, just as similar extensions were built for 2091, 2086, and 2093, suggests that like these mastabas, 2230 belonged to Phase i.

*2091.1* might have been built any time after the completion of 2091 and before the shift of orientation to the north. It extended the southern facade of the mastaba to the east, enclosing the area east of the chapel, which was then entered through a doorway perpendicular to the north face of 2089. This new entrance was probably decorated with the architraves found in fragments along the path adjacent to this mastaba. The extension was apparently built against rather than over 2089; a loosely filled space on the northern edge seems to have been designed to fit against an upper course of 2089's stepped south facade, which was removed along with the corresponding layers of the western face during Phase ii.

*2092* was a significant extension to the east built by the owner of 2093. Like 2091.1, it enclosed an interior space, providing more wall surface for decoration. It may have also created a more impressive entrance. It is difficult to understand why, having placed the false door in an anomalous position to make it more visible, the tomb owner then obscured it by building 2092, but perhaps this disadvantage was outweighed by the advantages of the addition. This change, like the construction of 2091.1 may have signaled a change in strategy with regard to the path, perhaps presaging the change in orientation. Another feature common to both additions is the architrave inscribed with the owner's name and titles. Both of these architraves seem to have been discarded in the path to the south of the mastabas they adorned.

Unlike many additions, 2092 had few shafts. There were only three unused shafts, none of which appear to have had a separate burial chamber. The dating of 2092 to Phase i is based on its similarity to 2091.1 and the position of a hunting scene at the southern end of the corridor. Such scenes tend to be placed near the entrance of tombs, because of their association with the outside world and their apotropaic function.<sup>7</sup> This would imply that the mastaba was still entered from the south for some time after the construction of 2092. Moreover, the doorway now at the northern entrance to the chapel has clearly been moved, and a southern entrance dating to Phase i is the only feasible original location for it. The external faces of 2092 were battered, not stepped like 2093. If the eastern facade of 2093 was originally stepped, it was presumably rebuilt and decorated as an interior wall at this time. *g* 2092 narrows towards the south, perhaps to make the passage between it and 2091 more visible to people who passed along the eastern facade of *g* 2000.

## Phase ii

Some time after the construction of the mastabas and extensions outlined above, the path that runs along the southern edge of the cluster was closed, and the path along the northern edge of the cluster became the principal route to the western tombs. This can be deduced from the fact that five existing tombs were modified by their owners to shift the principal entrance to the north. At the same time, the southern entrances were not only abandoned, but blocked. A simple obstruction in the path would not explain this change in traffic patterns, since pedestrians could be expected to return to the older path beyond it. The entire path around mastaba *g* 2000 must have been out of use, because otherwise tomb owners who left their southern entrances open would have had an additional source of visitors. While a new northern path would offer an incentive to tomb owners to elaborate northern entrances, there would be no obvious incentive to block the southern ones.

Although 2092.2 (an addition to 2092+2093 built during Phase ii) had a doorway giving access to the northern niche of *g* 2000, this doorway was positioned in an obscure corner and did not lead those who used it past any cult places. Had the owner chosen its position, he would undoubtedly have sited it to tempt passersby into his chapel; since it does not, the doorway's position can be assumed to have been mandated by some authority, presumably the same that mandated the blocking of the southern access.

The cemetery to the south of the path was accessible by the doorway just mentioned, by the gap between 2230 and 2085, (the only path to the south that seemed to draw any traffic worth attracting), and by the gap between 2088 and 2089, passing the entrance to the latter tomb, which may already have been abandoned. The passage between 2231 and 2240 was probably created during the course of this phase. All four passages are clearly placed so as to discourage casual visitors, and all pass through narrow gaps that could easily be controlled. The frequency, the equidistant spacing, and the obscurity of these passages all suggest that they were designated by some authority with responsibility for the entire cemetery. The aim of this authority seems to have been to prohibit traffic along the old path. The path could be crossed from north to south, although such crossing was not encouraged.

This closing of the path to traffic can best be explained by a partial collapse of *g* 2000 that made the path adjacent to it impassible. Tomb owners might in that case have been directed to block their southern entrances to limit access to a dangerous area, while four unobtrusive passages were left open so that people with duties in the cemetery to the south of the cluster could reach them. Presumably, access to the eastern end of the path was also blocked; otherwise, these passages would have been unnecessary. If the hypothesis of a collapse is correct, the path itself may have been restricted to workers making repairs to mastaba 2000.

Two methods were used initially for closing the southern entrance. Most commonly, a gap between mastabas or a southern doorway was simply blocked by a wall. A variant of this strategy was the construction of a subsidiary mastaba to the east, creating a corridor that was closed at the southern end. This method converted the area

<sup>7</sup> Y. Harpur, *Decoration in Egyptian Tombs of the Old Kingdom: Studies in Orientation and Scene Content* (London, 1987), p. 52. Remains of a similar scene in 2091 occur in the same place: just to the right of the door in an entrance corridor.

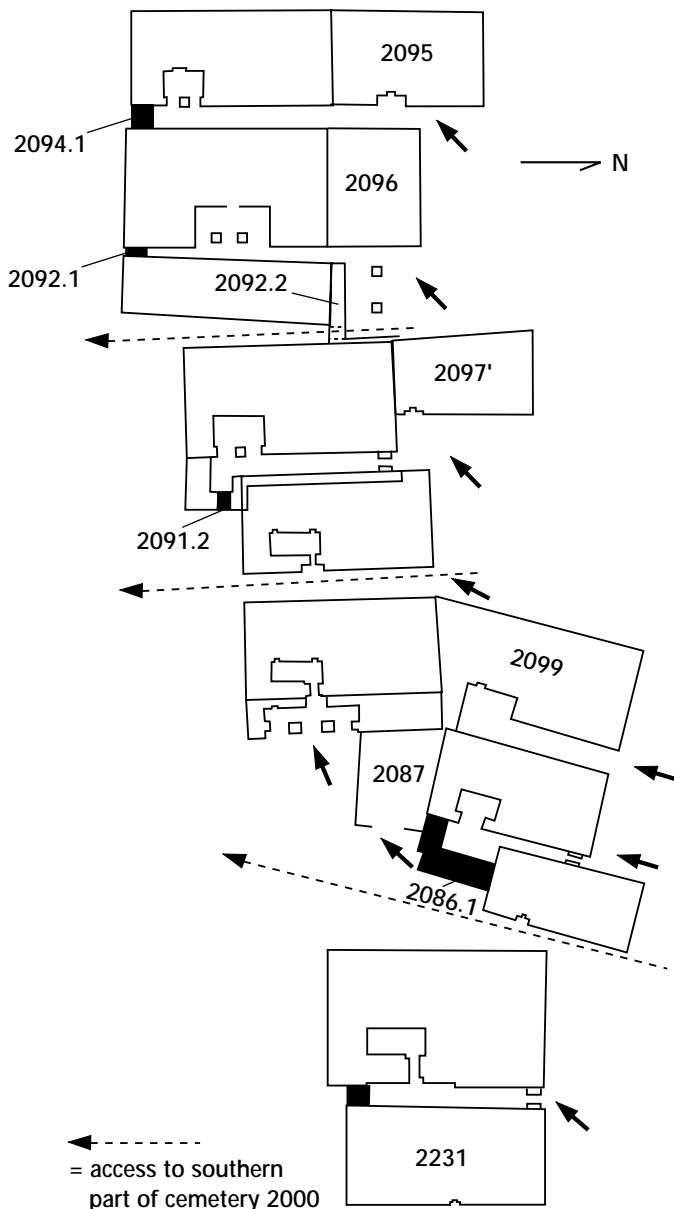


Fig. 7. Construction during the early part of Phase ii.

east of the mastaba into an interior space. Jambs and lintels of the southern doorway were usually removed and re-erected as a new northern entrance.

*2231* was clearly built as an addition to *2230*, rather than as an independent mastaba, since its western face was a vertical interior wall rather than a battered mastaba facade. Like other subsidiary mastabas, *2231* has a high density of shafts, and its only cult place is a single, undecorated false door on its eastern facade. A corridor was left between the mastabas, originally open to the north and closed by a spur wall at its southern end. The only surviving evidence of this spur wall is the recess cut into the eastern facade of *2230* to receive the abutment of a battered wall. This scar is visible beneath and extending out from the jamb of the later doorway at the angle of the wall's original batter (pl. 119a). That the corridor originally had a northern entrance is supported by the position of *2231*'s north facade, which is roughly aligned with the northern facade of *2230*. The northern

entrance would thus have been more impressive and symmetrical than the present southern one, which is built at an awkward jog where *2231*, which is smaller, joins *2230* on the south. During the building of *2231*, the recesses on either side of the doorway in the eastern face of *2230* were filled with stone blocks to a level flush with the adjacent walls. Like the monolithic orthostats added to the facade of *2088* in the course of its later remodeling, this packing converted an old exterior doorway to an interior doorway.

*2086.1*, an L-shaped wall, joined *2086* to *2085* and created a small open courtyard in front of the *2086* chapel. The doorjambs at the northern end of the corridor between the two mastabas were probably part of this addition. Reisner<sup>8</sup> indicates that this passage was roofed. There is no evidence of such roofing now, nor is there in the excavation photographs. In fact, it seems unlikely that this corridor was ever roofed; if it was, however, the roofing would presumably have been done at the same time the courtyard was enclosed.

*2091.2* reoriented mastaba *2091* in a similar way. The monumental doorway that had been added on the extension to the southeast was blocked, and its exterior was rebuilt. This wall (see pl. 41c) was only crudely finished on the exterior, since this part of the tomb was no longer visible from the entrance. The doorjambs and lintels that had framed the southern door seem to have been moved to the northern end of the corridor between *2091* and *2089*, a change that is evident in the alterations made in the lintel and jambs. A second pivot point was cut in the lintel to support a narrower door that allowed for the batter of the west corridor wall. The original pivot point would not have been usable with the lintel in its present position. The upper parts of the doorjambs were cut back to make allowance for the lintel, which was too wide for the new emplacement.

The corridor to which this new doorway gave access led between the stepped facade of *2089* to the east and the battered original facade of *2091* to the west. To convert this exterior passage to an interior space, *2091*'s facade was cut back to reduce, but not entirely eliminate the batter. The steps of *2089*'s rear face were packed with new blocks to create a vertical east wall for the corridor. The resulting wall was apparently too unstable to support roofing blocks, because the fill and facing of *2089* was removed to well below the roof of its chapel so that a wall could be built behind the facade to support the roof. This support wall impinged upon shafts b and c, but avoided shaft A, which was further to the east. Mastaba *2089* may have been rebuilt after the construction of this wall; if so, the relatively unbonded condition of the replaced blocks made them good targets for thieves. It is equally possible that mastaba *2089* had been completely abandoned at this period and was not rebuilt.

*2092.1* represents the various modifications in *2092*+*2093* to shift its entrance to the north. The doorjambs and lintel that are now at the northern end of the corridor were probably moved from an original emplacement in the south when the old doorway was filled in. As in *2091*, the door pivot point seems to have been repositioned to fit the new location. The drum set over the doorway, oddly, bears only a

<sup>8</sup> Reisner, *Giza Manuscript*, Chapter "L," p. 180.



few hieroglyphs of the inscription that was apparently intended for it.

*2094.1* blocked the gap between 2093 and 2094 with a wall at its south end. The resulting dead-end passage was then roofed. Again, doorjambs and a drum lintel may have been moved from this gap to the northern end of the passage. Since the exterior facade of this join was not excavated and its interior is difficult to evaluate, it might be argued that the spur wall joining 2094 and 2093 was an original part of 2094; however, the stepped eastern facade of 2094 clearly marks it as an exterior wall at the time of its construction. Like the corridor of 2091, this new corridor was roofed; but the walls of the passage were left as exterior stepped walls, as can be seen by the lack of any filling blocks and the cutting of a later false door into the stepped facade of 2094. The inconsistency may be explained by the fact that both the walls of the 2094 corridor were stepped, while the corridor walls in 2091 were stepped on the east and battered to the west. (The corridor leading into 2086, which also had asymmetrical walls, was probably not roofed, since it led to an open court rather than a closed chamber.)

*2099* is one of the more problematic mastabas in the cluster. Its final plan imitates the final form of the recessed chapels of Phase i after their modifications. The resulting chapel is entered through a corridor to the north, which leads to a simple recess with a false door at the southern end of its west wall. Just north of the false door is a rubble wall running west through the body of the mastaba, forming the north wall of shaft b. This wall's intersection with the later support wall of 2098, which runs inside the west facade of the mastaba is marked by a change in the coursing of that wall, as if the builders had seen a difference in the foundation of their wall at this point. This rubble wall may mark the south face of a previous mastaba on this site. Alternatively, it might represent a stage in the construction of 2099.

The junction of 2099 with 2088.S1, 2086, and 2087 at its southeast corner is difficult to analyze. The gap between 2088.S1 and 2086 seems to have been filled in, and then blocked by a large slab at the east end of the serdab chamber. Such special blocking would not have been needed had 2087 been built first, which suggests that 2099, or at least the serdab, preceded 2087. If the rubble wall was the original southern face of 2099, however, the serdab was probably built later than the mastaba.

*2096 and 2092.2* were built as extensions of 2092+2093, to create a portico to its north. They were built after the doorway had been relocated at the north end of the mastabas. (Had they coincided with 2092.1, the relocation of the doorway, the door would surely have been set into the new construction.) *g 2092.2* is an L-shaped facing wall that converted the battered facades on the north of 2092 and the west of 2091 into vertical (interior) walls. Where the wall crosses the gap between 2092 and 2091, a narrow doorway was constructed to allow passage to the east face of mastaba *g 2000*. Whether the eastern leg of 2092.2 originally extended north to align with the facades of 2096, 2089 and 2088 cannot now be determined, since the end of the

wall was removed during the construction of 2097'. Such a wall would have had the disadvantage of obscuring the view of the portico from the northeast.

Forming the western wall of the portico is 2096, an extension to 2093, which contains four shafts and a serdab with two vertical slots opening onto the portico. (Like the earlier extension, 2092, its shafts apparently were left unused.) It extends north to align, roughly, with the north faces of 2088 and 2089. Its north and west faces are battered, and on the south it abuts the stepped facade of 2093. The east facade, which faces the portico, is vertical. Its upper courses were finely finished, with narrow vertical serdab slots, while the blocks of the lower courses were left rough. The similarity of this surface treatment to that of the east face 2097', and its dissimilarity to the other two walls of the portico, 2092.2, may indicate that 2096 was built later than 2092.2, replacing a spur wall or another structure of which no trace now remains.

The two square pillars now in this area are unlikely to have been erected in their present position at this point of the construction, since they are set at the standard distance from the serdabs 2097.S2 and 2097.S3, which had not yet been built. A notch in the top of the west wall of the room may represent the seating for an architrave that spanned pillars positioned closer to the back wall of the portico.

*2095* was probably built about the same time as 2096 or slightly earlier, since 2096 obscures its tiny recessed chapel and central false door. The mastaba has nine shafts. Since a high density of shafts seems to be characteristic of mastaba extensions, it was probably built as an extension of 2094.

*2097'* was built onto the north side of 2091, extending out to align quite precisely with the north facade of 2231. The angle of 2230, which intervened between the two, was different, although 2230 clearly predates 2231. This suggests that 2097' was oriented according to the grid alignments postulated above, which apparently began to affect tomb placement in this part of the necropolis during the latter part of Phase i.

The west face of 2097' is no longer in its original position. A line of blocks running under the present west face, as well as the angle of the same wall seen within the serdab chamber of 2097.S2, indicates that the west face originally ran at a sharper angle to the northwest. The original west face was also battered, since it was built as an external wall.

On its eastern face, 2097' is remarkably similar to 2096, in that the blocks in its lower courses have been left roughly finished, while those of its upper courses were carefully smoothed. Also like 2096, the serdab (S1) had two vertical slots, and two shafts were located directly behind it with their burial chambers running beneath. Despite the false door at the southern end of the facade and a smaller one on the north, the density of secondary shafts suggests that this tomb, too, was an extension.

*2097.S2 and 2097.S3* designate the two serdabs built in front of the pillared portico of 2092+2093 that turned the portico into a pillared hall. Both the serdabs face north, as indicated by their northern slots;

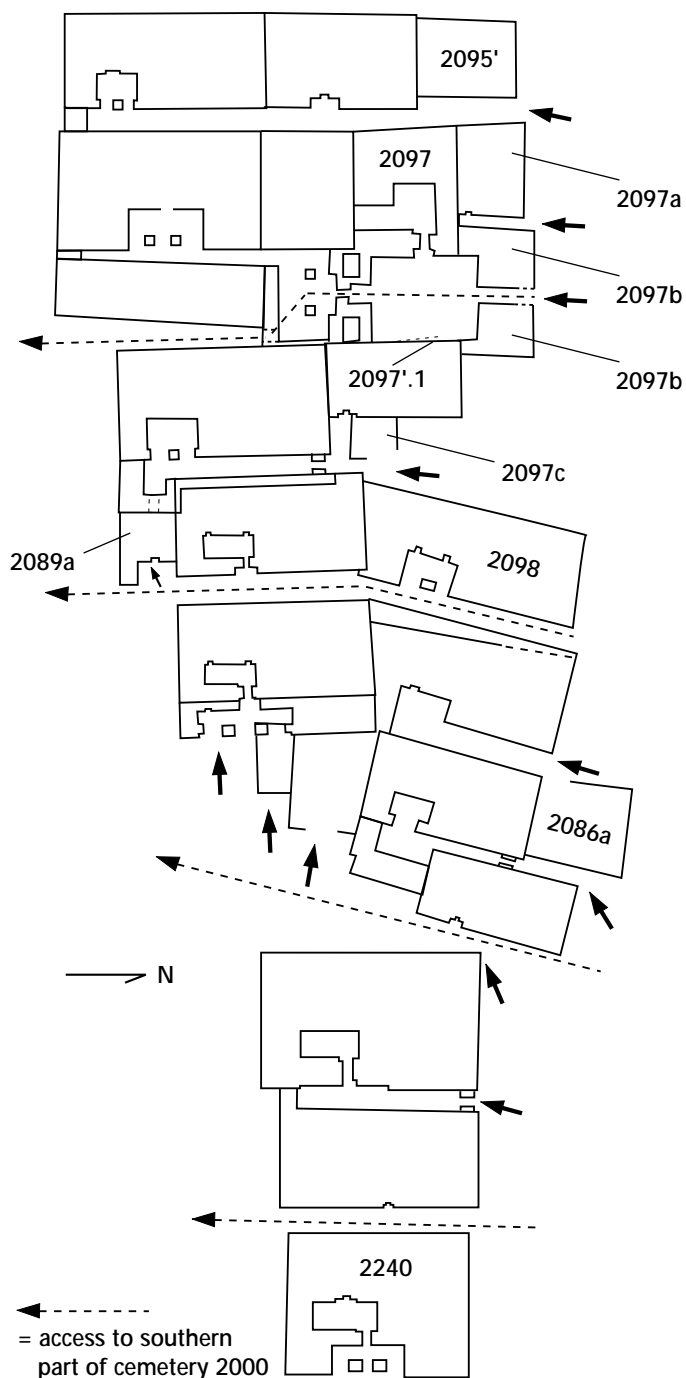


Fig. 8. Construction during the later part of Phase ii.

they are thus extensions of that tomb, rather than of 2097, which they predate. The drum lintel and the symmetrical embrasures of the doorway between the serdabs face south, dating them to Phase iii. They were probably added as part of 2097'.1. The interior east wall of S2 is set at the same angle as the original angle of the west wall of 2097'; it is probably a segment of that wall left in position because it was invisible inside the serdab. The west wall inside S3 seems to parallel it, but the east wall of 2097 abutting it is at a different angle. The serdabs were thus clearly built before 2097.

2097 was built abutting 2097.S3 and the north exterior wall 2096, the face of which was partially cut back to make a vertical interior

wall for the new chapel. The limestone lining the chapel has a high density of nummulitic inclusions and by far the finest relief decoration of the tombs in this cluster. Its door opened to the east, onto a courtyard created by the serdabs of 2092+2093 and the west face of 2097'. The north face of the mastaba was aligned with those of 2097' and 2231.

2097'.1, the rebuilding of the west face of 2097' to create a vertical face parallel to the east facade of 2097 probably took place at the same time as the building of 2097. This rebuilding seems to have affected only the wall north of the serdab, because the interior wall of the serdab is at the same angle as the foundation course that can be seen projecting at the northwest corner of 2097'. The rebuilding was probably intended to create a regular rectangular courtyard between 2097' and 2097.

2097b, in its earliest form, was the continuation of 2097 and 2097'.1. It formed the northern end of a courtyard that gave access to both 2097 and the 2092+2093 complex through doorways exactly centered in its west and south walls. As preserved at present, it appears to be built against 2097, 2097', and the wall that joins their north faces. This wall dates to Phase iii (see 2097.1 below); 2097b cannot be placed in Phase iii because it has no access from the south. There is, in fact, no access to the present interior space of 2097b at all. This interior is T-shaped, with its basal leg extending to the north. This northern leg was originally an entrance corridor; the surviving course closing it represents the remains of a door sill construction, such as that still in place at the entrance to 2091. The cross-stroke of the "T" is simply the north end of the original courtyard, cut off by a later wall. A burial shaft was built into the western end of this space; the construction that seems to abut the later wall is probably reconstruction done in connection this and another shaft built in 2097b after the wall was built.

The possibility of an even earlier use of this space is suggested by the central position of the doorway to the chapel of 2097 and the fact that the western half of 2097b is exactly the same depth as entrance porticoes in the other mastabas of the cluster. This western half of 2097b may have been built first, as a portico. The eastern half would then have been added later, as part of the remodeling of 2097'.1, to convert the portico into a courtyard. The evidence for this intermediate phase is, however, very tenuous.

2095' was an extension of 2095, presumably built after the construction of 2097, since its facade was set back to allow for that mastaba's projecting west face. A gap in the facade of 2095' probably held a false door. The north face of 2095, which this addition abuts, is now marked only by a retaining rubble wall, which suggests that the finished blocks of the facade were removed during the construction of 2095'. These blocks were probably reused on the exterior of the extension. This may have been the usual practice in mastaba reconstructions, which would account for the uniformity and lack of joins seen on so many reconstructed exterior walls in this cemetery. The northwest corner of 2095' is co-linear with those of 2099, 2097a, and 2097b, suggesting that this line served as a limit to construction

when these tombs were built. g 2098, which extends north of the line, is thus presumably later.

*2097a* was built along the north wall of 2097, and therefore after it; as noted above, it also was probably built before 2098. It has no interior space, but a false door stela was set into its eastern face, reached by a narrow passage between this mastaba and 2097b. The false door is no longer in place, and was not photographed by the Reisner expedition.<sup>9</sup>

*2097c* was built in two phases. The earliest part might have been built any time after the building of 2097'; however it could also have been built during Phase iii, since no change was made in the entrance of 2091 during that period and visitors would have continued to use the northern access. This initial construction left accessible both the false door and the serdab slots of 2097'. The subsequent expansion to the north, 2097c.1, added a serdab and another shaft, but obstructed the serdab of 2097 and perhaps its northern cult place. This later addition, by its intrusive nature, must date to Phase iv.

*2089a* was built against the south face of 2089 and the blocked eastern entrance to 2091. It must therefore have been built after the beginning of Phase ii. Although its orientation to the southern pathway might suggest a date in Phase iii, it seems more logical to date it to Phase ii, since its presence here at the beginning of Phase iii would explain why the owner of 2091 did not simply re-open the doorway facing the southern path. The corridor between 2088 and 2089 would have brought visitors passing to the southern part of cemetery 2000 directly in front of 2089a. Mastaba 2089a has a recessed chapel, slightly larger than the same type of chapel in 2095, despite the fact that the tomb itself is much smaller. The central false door in the western wall was inscribed with incised, but illegible, signs.<sup>10</sup>

*2087* was the only new tomb built during Phase ii that was oriented towards the path that runs south of the cluster, although it was also accessible from the north. The original shape of the chapel is difficult to determine; but some plaster remaining on the south face of the wall to its north, now covered by 2084, suggests that 2087 may originally have opened to the east with a door or recess marked by doorjamb. It was clearly built against 2086.1, the extension connecting 2085 and 2086, and thus cannot be earlier than Phase ii. g 2088.S2, which was built against it, was made almost inaccessible by a Phase iii construction, which implies that 2087 predates Phase iii. The surviving decorated doorjamb were probably added, or moved to their present position, in connection with the construction of 2088.1 and 2084 in Phase iii. The anomalous direction of the man leading an ox on the west jamb, leaving the chapel with the offering, suggests an association with the owner of the adjacent tomb, 2088.

*2088.S2*, a serdab built along the south face of 2087, was apparently also designed to take advantage of the approach to 2088 from the northeast. The slot is oriented to the east, and seems sited to attract visitors who were passing between 2230 and 2085 in order to visit tombs south of the cluster. When the orientation of the cluster reverted to the south, a Phase iii wall (2088.1) was built, shifting the entrance of 2088 to the south. Although the wall passed close in front of the slot of this serdab, a narrow space was left in which to make offerings.

*2240*, the easternmost mastaba in the cluster, might have been built at any time, since it does not abut any other mastaba and it is oriented towards the east. Its north facade aligns with the north facades of 2231, 2097', and 2097. Its serdab slot was probably in the back wall of the northern part of the portico,<sup>11</sup> which also suggests a northern approach. Moreover, the tombs to the south of it are clustered around the southern end of the passage between 2231 and 2240, suggesting that this passage formed one of the few paths of access to the southern part of the cemetery during Phase ii. The mastaba thus probably dates to Phase ii; and the reference to Osiris on the lintel over its portico suggests that it should be placed late in that phase. (The only other major tomb in the cluster to mention Osiris is 2098, the decoration of which appears to date to Phase iii.)

*2098* was probably built during Phase ii, because it is located on the north side of the cluster and has an obvious northern entrance. Its decoration, however, suggests a southern orientation. The east, south, and west faces of the chapel's central pillar are decorated, while the north side is not. In addition, the figures on the east and west faces both look south. The only decoration in the corridor is an offering list on the east wall south of the recess. A carrying chair scene, often placed in a prominent position to draw visitors into a tomb, faces the southern entrance from the north wall of the chapel (albeit obscured by the pillar). The southern entrance to the chapel, via the path in front of 2089, is now blocked by a shaft wall reconstructed with modern cement; but remains of a door sill and the base of doorjamb are visible under the reconstruction. The southern entrance was thus clearly open; and to judge from the orientation of the decoration, it was apparently more important than the northern entrance.

The corridor to the north suggests that the north orientation was dominant during the building of this chapel, so the shift from Phase ii to Phase iii probably occurred while the mastaba was still under construction. Another reason for placing 2098 at the end of Phase ii is its projection beyond the line made by the northwest corners of 2095', 2097a, 2097b, 2099, and 2085, which apparently marked the northern limit of construction for most of Phase ii. Perhaps this limit was abandoned just before access to the southern path was restored. Alternatively, the northern end of the mastaba may represent an extension of the mastaba built in Phase iii. As noted in the

<sup>9</sup> The Reis's Diary makes no mention of a false door on this mastaba, nor does it appear on his plan (pp. 736 and 745). Reisner, *Giza Manuscript*, Chapter "L," p. 168, describes the cult place of 2097a as "a monolith with a ka-door cut in its face. Width of slab, 0.7 m; width of the niche, 0.45 m; unincised."

<sup>10</sup> Reisner, *Giza Manuscript*, Chapter "L," p. 141. The false door is no longer in place, and its present location could not be determined.

<sup>11</sup> The other possible opening to the serdab would be from the north wall of the chapel, since neither of these areas survive to the relevant height. Except for three added exterior serdabs, 2088.S1, 2097.S2, and 2097.S3, however, all serdabs in the cluster face east.

previous chapter, the high concentration of shafts at this end of the mastaba suggests a subsidiary mastaba; but if there was an abutment, it was well camouflaged.

The corridor roof blocks of 2098 were partially supported by the back (western) facade of a neighboring mastaba, 2099. As with mastaba 2091, this facade had to be braced by a supporting wall that encroached upon the older mastaba. The builders apparently distinguished two different types of foundation for this wall, and as a result, the two halves of the support wall were differently coursed. The point where the coursing changes is marked by a rubble spur wall that runs east across 2099. North of it, the base of the supporting wall was laid on a relatively high level; south of the spur wall, the supporting wall rested on bedrock. However, the uppermost surviving course on the south part of the wall is very low, presumably to level the courses so that the upper courses could be integrated. (The upper part of the supporting wall is now lost.) The support wall was thus clearly built all at one time.

It is unclear whether the area between 2088 and the northern part of 2099 was empty at the time of construction of 2098, or whether it contained a construction that somehow differed from the northern part of 2099 in its stability. The spur wall resembles the rubble wall seen between 2095 and 2095', which suggests an addition was made to the south of 2099 after its original construction as a smaller mastaba. However, the inner corridor wall of 2098 shows no evidence of a join at the intersection with the spur wall; and, more importantly, one would have expected the battered west wall of the passage to have been rebuilt as a vertical interior wall. The relationship between these mastabas remains a problem. However, the serdab chamber in the southern part of the mastaba probably dates to the construction or reconstruction of this half of 2099 and thus post-dates 2098.

*2086a* might have been built onto the north face of 2086 at any time during the period when the northern path was in use. Like 2098, however, it crosses the line that seems to have served as a northern limit to the cluster during most of Phase ii. It was thus probably built at a time when the shift back to the southern approach was beginning. Although it has no interior space, it seems to have some interior rubble walls, and thus may have changed in shape after its initial construction.

### Phase iii

Phase iii was marked by a return to the original orientation of the cemetery, in which the path to the south of the cluster was the principal means of approach. While many major tomb owners made a clear effort to reorient their mastabas to the south and block off the northern entrances, others retained their northern orientation. The northern path was thus probably still usable, and for tombs where a change in orientation was either architecturally impossible or beyond the resources of the tomb owner, the entrances were left as they had been. There is no evidence to contradict the assumption that all new construction was oriented towards the south during this phase.

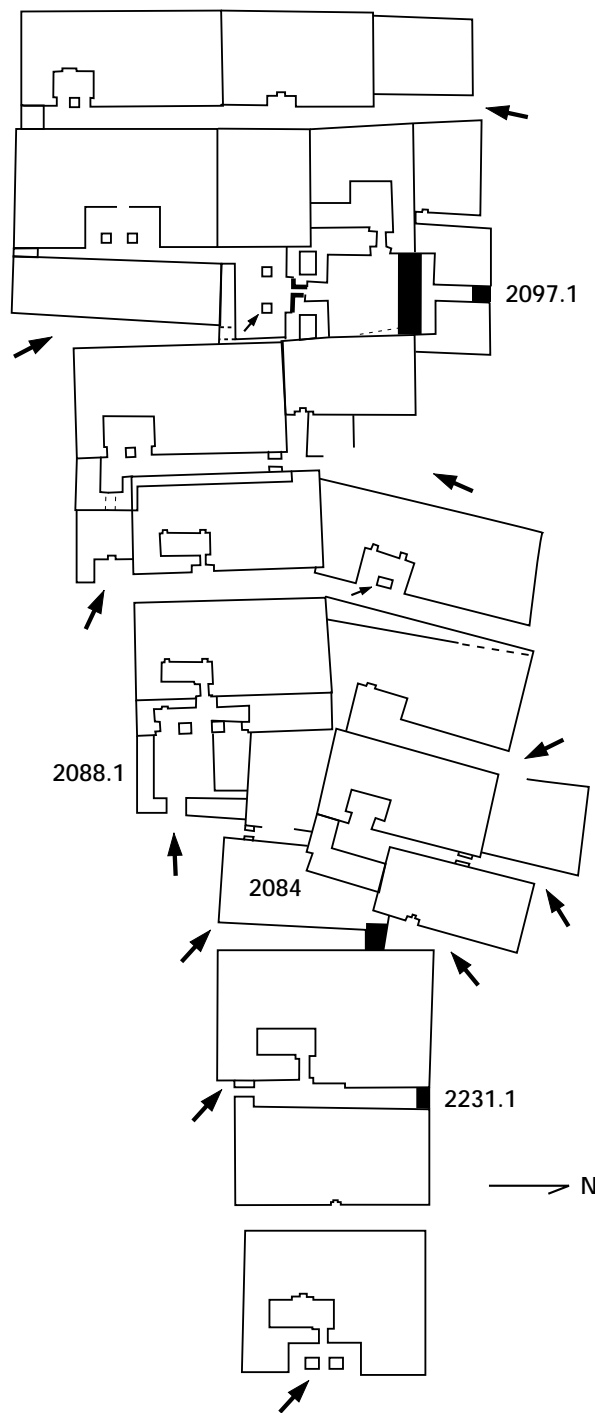


Fig. 9. Construction during Phase iii.

*2098*'s decoration is probably to be attributed to the beginning of this phase.

*2231.1* was a modification to 2230+2231. The northern entrance was blocked and the doorway that gave access to the corridor between 2230 and 2231 was moved to its southern end. The join between this filling wall and 2231 is detectable on the inside of the corridor, but cannot be seen on the exterior, suggesting that the battered facade was rebuilt to disguise the blocking of the original doorway. The join with 2230 was not similarly camouflaged, perhaps because the large blocks of its masonry could not be joined to the ordinary u-masonry

of 2231. The original southern spur wall of 2231 seems also to have simply abutted 2230. This spur wall was removed in Phase iv, and two doorjambs, one of which has the beginnings of decoration, were placed in the recess left by its removal. (The angled southern edge of this recess exactly matches the batter of the south face of 2231, and the doorjamb, which is vertical, does not fit it. See pl. 119a.) There are gaps between the eastern doorjamb and the lowest three courses of 2231; the fourth course, which bears the lintel, is better fitted to the jamb, and was rebuilt to support it. The lintel was apparently removed from the original doorway and replaced on the doorjambs at the south end of the corridor with its front face down. The earlier socket and pivot point are visible on its inner face (see pl. 118b). As was the case with the similarly transplanted northern doorway of 2091.2, the original doorway was apparently wider than the new emplacement. However, while the upper portion of the jambs were cut back in 2091, in 2231 the jambs were set at an angle to fit the narrower opening.

*2097.1* consists of the wall that runs from 2097 to 2097', which it clearly abuts. The southern interior wall of 2097b is an extension of the rebuilt western face of 2097', which was apparently reduced to a single course when 2097.1 was built. Strangely, the northern half of 2097b seems to have been partially built against this later wall; on the northern exterior face, the wall continues to the northwest corner of 2097. While there are other examples of exterior walls that have been rebuilt to obscure joins, none are underneath earlier constructions. One solution would be to assume that the fill of 2097b was leveled during the construction of shaft 2097b a, and then rebuilt to stabilize the interior of the shaft and prevent access to the area.

Probably at the same time that the northern entrance to 2097's courtyard was blocked, its southern entrance was embellished. The present pillars in the courtyard to the south were probably set up at this point, converting what had originally been a portico entrance to 2092+2093 into a portico entrance to 2097. A well-built entrance doorway was constructed between the earlier serdabs, further emphasizing the southern approach to the chapel. (Both of the pillars and the doorway may have been moved from earlier northern-facing emplacements in the same courtyard.)

*2084* must date to Phase iii, since it cannot be earlier than 2086.1 (Phase ii) and it is entered from the south; yet its only exterior facade is stepped, a feature otherwise seen only in Phase i mastabas in this cluster. There are several possible explanations for this anachronism, none of them entirely satisfactory. The construction of 2084 must have also led to the modification of 2087, whatever its original shape. The west wall of 2084 became the eastern boundary of the 2087 chapel, and doorjambs were erected between this wall and the southwest corner of 2087. The doorjambs may have previously occupied another position.

*2088.1* represents the addition of spur walls to the south and east of 2088, which created a courtyard that enclosed the pillared portico and both serdabs. These walls, unlike earlier additions to the mastaba, were not stepped. They also extend at a slight angle to the

earlier constructions. As mentioned above, they limit access to the serdab slot at the east end of serdab 2. The door in the eastern wall was placed asymmetrically to the south, roughly centered in the portion of the facade that projected south beyond the southern facades of 2094 and 2230. This extension thus probably post-dated 2094.

The courtyard was probably enclosed by the son of the original builder of 2088, whose name is known from two lintels and a doorjamb found near its entrance. It was probably this same son who added the second major false door, in the southwest corner of the portico, and filled the remaining doorway embrasures on the west face of the portico with two thicknesses of monolithic orthostats. Those on the northern half bear a sunk relief depiction of a man entering the tomb. Since the principal tomb owner is conventionally shown leaving the tomb, this orientation would be appropriate for the owner's son, and in fact the son employed the same orientation on the doorjamb at the entrance to the courtyard.

The orthostats and the blocks of the eastern face of the extension were clearly quarried from the same area (the same vein of soft limestone runs through them all), and hence both modifications were probably part of the same building project. It was apparently this enclosure of the courtyard, rather than the previous conversion to a portico, that required the filling in of the revetments around what was originally an exterior doorway.

## Phase iv

The tombs of Phase iv represent the final stage of construction in the cluster. These small tombs were characteristically built in the interior spaces of earlier tombs and tomb chapels. In some cases, they seem to have been deliberately sited to obstruct areas that would have been used in the cult, such as the space in front of false doors, in front of serdab slots, and inside serdabs. These incursions are the more notable because of the care that was taken to avoid obstructing these areas during the three earlier phases in this cluster. Great consideration of earlier constructions, and especially earlier cult places, was shown, for example, by the builders of 2088.1, 2097b, 2098, and the north part of 2097c.

The southern part of 2097c, in contrast, obstructs the serdab slots of 2097'. If it had been built a few meters to the northwest, in the angle between the north face of 2097' and the east face of 2097b, it would have had the same support (two sides of existing walls) without intruding on the cult focus. Although the consistent placement of these intrusive tombs directly in front of cult places suggests that their builders hoped to stop or to appropriate the earlier cult, it is also possible that these intruders simply shared the original owner's views on advantageous positioning of their monuments. Serdab slots and false doors were generally located on west walls in visible and accessible places; these locations would be desirable to the builders of these small intrusive mastabas for the same reasons. Whether the intrusions of Phase iv were malicious or simply the result of shared ideas about good placement, however, it is clear that some sort of restriction must have been in force during the earlier part of the cemetery's development, and that these constraints disappeared in Phase iv.

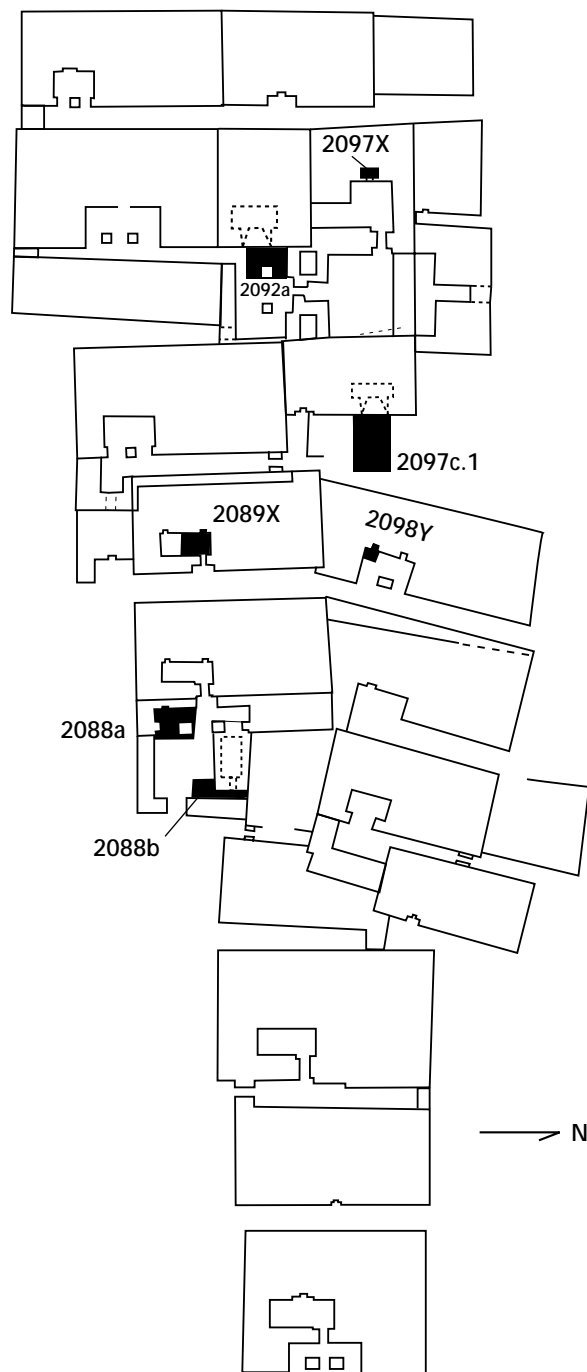


Fig. 10. Construction during Phase IV.

It is possible, of course, that some of these intrusive secondary tombs were built in earlier periods. However, the choice of sites seems to indicate a south-ward orientation, and several other features point to a later date. Mastabas 2088a and 2088b are architecturally dependent upon 2088.1, the last construction of Phase iii. Two of the tombs into which intrusive shafts were built, 2097 and 2098, are among the last tombs built in Phase ii, and the latter was decorated in Phase iii. g 2097 x, built in the serdab of 2097, is probably to be connected with the intrusive inscription on the niched facade of 2097. This sunk relief figure is identified as Mernetjer-Izezi, and since he gives no alternative name, and his titulary shows no special connection with King Izezi that would have justified the adoption of

a name in his honor,<sup>12</sup> he was probably born during or after Izezi's reign, which would date his intrusion into 2097 to the reign of Unis or Teti, or slightly later. The other intrusive tomb from which decoration survives is 2092a, which boasted a false door stela of sunk relief, dedicated to a man named Nimaatre/Tut and is of a type typical of the early Sixth Dynasty. The north side of this stela was usurped by another man, Khnum-khaf/Bebi, shortly thereafter. The fact that these five intrusions, by their location or the style of their decoration, almost certainly postdate the large-scale building in the cluster suggests that the remaining intrusive tombs are also of later date.

*2092a* is a small mastaba located against the west wall of the pillared courtyard between 2092+2093 and 2097. It obstructed access to the northern of the two serdab slots of 2096 (the extension of 2092+2093), and incorporated the western pillar in its eastern wall. This chapel was decorated with a three-panelled false door, apparently cut to fit the space between the pillar and the south wall of the serdab to the north of it. The placement of this mastaba shows some consideration for the earlier tomb owner, since it rendered only the northern half of the serdab unusable. Later, the northern half of the false door itself was usurped, presenting a nice moral lesson.

*2088a* and *2088b* were built in the courtyard created by 2088.1. g 2088a was positioned in front of the false door of the owner's son, incorporating the southern pillar of the portico in its northern wall. g 2088b was built into the passage which had been left to provide access to serdab 2 when 2088.1 was built. It is unique in having no western face, before which a cult could be carried out. This may be due to the lack of alternative locations in the crowded and irregularly shaped courtyard. However, the fact that it was placed directly in front of a serdab slot, even when this position was not suitable for a cult focus, again suggests the possibility that the blocking of older cult areas was deliberate.

Another secondary construction in the courtyard of 2088 forms a useful contrast to the intrusive constructions of Phase iv. A false door belonging to a woman was set into the inner doorway of the chapel, but does not obstruct access to a cult place. The owner's name was also found on a servant statue from the serdab of 2088, so she was probably a contemporary of the tomb owner. Since she bears the title "ka-priest" on her false door, she presumably served in his cult, and perhaps received his permission to set up her monument in his tomb. This false door thus probably predates Phase iv.

*2097c.1*, the northern extension of 2097c in front of the serdab slots of 2097' seems again to have been built with the intention of blocking of the cult area of an earlier tomb. As pointed out above, a nearby area to the northwest would seem to have offered the same structural and positional advantages without blocking access to an earlier serdab. Although the east face of this mastaba is incompletely preserved, it seems to have extended further to the east at its southern end, taking advantage of the angled space created by the west face of

<sup>12</sup> The use of a royal name in personal names seems not to have been entirely uncontrolled. See A.M. Roth, "The Distribution of the Old Kingdom Title *hntj-s*," *Beihfte zu Studien zur Altägyptischen Kultur* 4, Proceedings of the 4th International Congress of Egyptology, 1985 (Hamburg, 1991), pp. 177-86.

2098, confirming that the second phase of 2097c, at least, was built after 2098.

2089x was probably built as a shaft and burial chamber in the chapel of 2089 during Phase iv.

2098B and 2098C also represent the reuse of a serdab. Although the serdab slot does not survive, being above the line of preservation, these shafts were clearly built into a closed chamber of finer masonry than their other walls provide.

2098Y is a shaft that seems also to belong to this category, because of its careful location in front of the false door of 2098.

One type of feature that cannot be dated architecturally is the secondary shaft. These shafts probably post-date the mastabas in which they occur, since they are built into its fill. Shafts cut outside the mastabas, or built into the corridors between them, pose greater problems of dating. It has been noted above that mastabas built as extensions to earlier tombs seem to have more secondary shafts than independent mastabas. (Compare, for example, subsidiary mastaba 2231, with ten shafts, to the slightly larger independent mastaba 2230, with three). This may be explained by a difference in the composition of the mastaba fill, which rendered the body of the mastaba more easily penetrable. It is also possible that the secondary shafts were all built as the mastaba was being built, despite the fact that they do not penetrate below the surface of the bedrock. Alternatively, as was suggested above, the distribution may represent a sort of *Respektsraum* left for the tomb owner and his immediate family. To answer such questions would require careful excavation of these structures.

Secondary shafts seem in several cases to correlate with the positions of minor, presumably secondary, vertical niches, e.g., corresponding to 2091 d, 2094 b and d (where two false door niches appear to have been aligned with two co-linear shafts), and possibly 2240 b. The intrusive shaft 2097 x, built into the serdab of 2097, probably contained the burial of the man whose figure, name, and titles are inscribed on the central panel of the palace facade decoration on the wall directly in front of the serdab. The relationships of 2094 b and d and the false door niches suggest that multiple secondary shafts may have been excavated at the same time.

## Dynastic Dating of the tombs

The relative dating of individual tombs in the cluster has been obtained by examining their architecture and then their orientation. Dates in terms of kings' reigns are more difficult to ascertain. Of the two royal names that occur in the decoration, Khufu clearly predates the earliest tombs in the cluster, since the title *hntj-š* is not attested until the Fifth Dynasty; while the other name, Izezi, occurs in the name of a usurper in one of the latest tombs, and thus is not very useful in dating the major construction.

In the absence of textual evidence associating the tombs with specific kings, the best method of assigning these tombs to individual reigns is a comparison of their architectural and iconographic features with other Old Kingdom tombs. The ranges that result from the comparative iconographic dating of the decorated tombs can be

correlated with the ranges of decorated tombs known to be earlier or later architecturally to arrive at reasonably accurate dates.

The dates assigned here are based largely on the application of the stylistic and iconographic criteria for dating developed by N. Cherpion<sup>13</sup> and by Y. Harpur.<sup>14</sup> Cherpion's criteria include both the earliest and latest dates for features, based on the royal names occurring in the groups of tombs where they are found. The ends of these ranges are thus less dependable than the date at which these motifs first occur, so that the dates resulting from the application of her criteria are more likely to be too early than too late.<sup>15</sup> However, the dates her method yielded proved to be largely consistent with the relative dates arrived at by analysis of the tombs' orientations; and they also do not contradict the dates suggested by parallel scenes and texts. The most significant of her criteria proved to be the continued use of chairs with bull's legs rather than the later and more prevalent lion's legs, the backrests of chairs, the number of jambs on a false door, and the height of loaves on an offering table. The dates of Harpur's features are based on more synthetic tomb datings, argued on a number of different types of evidence; they are thus more realistic than Cherpion's mechanical dating to the latest royal name. In most cases, Harpur gives only the feature's beginning date, and the scarcity of marsh and agricultural scenes in the cluster limits their usefulness. Many of her dates are backed up with tables of examples, but others are more difficult to evaluate.

Another useful dating criterion is the occurrence of a procession of named estates personified as men in 2098. H. Jacquet-Gordon has shown that only women occur in such processions after the Fifth Dynasty.<sup>16</sup> The presence of the god Osiris is also a limiting factor for dating, since this god only begins to occur in offering formulas in the reign of Izezi.<sup>17</sup> Osiris occurs in 2092a, 2098, 2240; but he is absent from offering formulas in 2088,<sup>18</sup> 2091, and 2097'. g 2092+2093 and 2097 have no offering formulas at all, an omission that seems to be more common in the period before the introduction of Osiris. The dates are further narrowed by the relative datings as well as by more specific parallels and the apparent style of the art.

### Phase i

g 2088 Ka-khent	Date: Niuserre
g 2086 Redi	Date: Niuserre
g 2091 Kapi	Date: Niuserre

These three datings are based on the occurrence of a tear-shaped chair cushion on a false door of Kapi. This is one of Cherpion's most

<sup>13</sup> N. Cherpion, *Mastabas et Hypogées d'Ancien Empire: Le Problème de Datation*, (Paris, 1989). The 64 criteria and the tombs on which they were based are summarized on pp. 146–205.

<sup>14</sup> *Decoration in Egyptian Tombs*. Her appendix 3, pp. 253–64, gives the earliest attested dates for 324 features, emphasizing, but not limited to, marsh scenes and agricultural scenes.

<sup>15</sup> See my review of Cherpion's criteria, and an initial attempt to apply them to this cluster, in *JNES* 53 (1994), pp. 55–58.

<sup>16</sup> H. Jacquet-Gordon, *Les noms de domaines funéraires sous l'ancien empire égyptien*, BdE 34 (Cairo, 1962), p. 27.

<sup>17</sup> Recent arguments confirming the evidence for this traditional dating include W. Helck, "Überlegungen zum Ausgang der 5. Dynastie," *MDAIK* 47 (1991), p. 164, and A.O. Bolshakov, "Princess *HMT-R(W)*: The first mention of Osiris?," *CdE* 67 (1992), pp. 203–210.

<sup>18</sup> The chapel of 2088 records no offering formulas at all; however, only Anubis is mentioned on the small secondary false door of Ankhimanebes, a woman who is also represented among the serdab statuary of the same mastaba. See pl. 31c.

convincing criteria, which disappears after the reign of Niuserre.<sup>19</sup> Architecturally, Kapi must be later than Ka-khent and roughly contemporary with Redi, so their tombs must be dated equally early, despite the lack of clear iconographic criteria. The jar stand on Kapi's false doors is also best paralleled in earlier periods.<sup>20</sup> There is one problem with this dating: Ka-khent's children are depicted as musicians, which by Harpur's analysis would date his tomb to Izezi or later.<sup>21</sup> This feature is so rare in the Fifth Dynasty, however, that extending it a reign earlier does not strain probability. Apart from the terminus ante quem provided by the tear-shaped cushion, the application of Cherpion's criteria result in a dating only of Izezi or earlier. A dating in the reign of Menkauhor, or even early in the reign of Izezi is thus not impossible for this earliest group of tombs, but the earlier date fits better with the multiple additions and alterations made to the cluster between their construction and the end of the Fifth Dynasty.

g 2092+2093 Za-ib Date: Izezi

The application of Cherpion's criteria to this tomb result in a date in the reign of Izezi or earlier.<sup>22</sup> One of the most unusual features of the chapel's decoration, however, is the seated figure of the tomb owner on the jambs of the false door, a rare feature which Harpur states began to appear in the reign of Izezi or Unis.<sup>23</sup>

**Phase ii**  
g 2097' Tjezet Date: Niuserre? or Izezi

The mixed offerings on the table, Cherpion's criterion #22, do not occur with royal names after Niuserre; while the other criteria that apply restrict it only to the reign of Izezi or earlier.

g 2097 Nimaatre Date: late Izezi–Unis

The tomb is most probably to be dated to early in the reign of Unis, because of the many parallels with the tomb of Ptahhotep ii at Saqqara in the decoration and architecture. The hunting scenes are paralleled not only in the chapel of Ptahhotep ii but in the chapels of Mereruka and Meriteti, dating to the first two reigns of the Sixth Dynasty.<sup>24</sup> Several of Cherpion's criteria suggest a date no later than Izezi; and Harpur notes that the *senet* game does not begin to appear in banquet scenes until the middle of that reign.<sup>25</sup>

g 2240 Nefer-mesdjher-Khufu Date: Izezi–Unis

<sup>19</sup> Cherpion, *Mastabas et Hypogées*, pp. 147–49 (criterion #3). This feature, according to her chart, does not occur with any royal names after the reign of Niuserre. The fact that it occurs so frequently with Fourth and Fifth Dynasty kings up to that point, and the prevalence of other types of chair back associated with the cartouches of later kings makes it likely that this type of chair back simply went out of fashion. The presence of criterion #1, the lack of a back or a cushion altogether, is less definitive, but also supports a dating before Izezi.

<sup>20</sup> For example, in the Fourth Dynasty tomb of Khufukhaf i (W.K. Simpson, *The Mastabas of Kawab, Khafkhufu I and II*, Giza Mastabas 3 (Boston, 1978), p. 16), where the stands flank the false door; and a frieze of six stands occur across the base of the early Fifth Dynasty false door of Kai; S. Curto, *Gli Scavi italiani a el-Ghiza* (Rome, 1963), pp. 47–48, fig. 12, and pl. 12.

<sup>21</sup> Harpur, *Decoration in Egyptian Tombs*, pp. 256 and 332, chart 6.13.

<sup>22</sup> Cherpion's criterion #5, the high, rounded cushion covering an invisible high back, would seem to limit the tomb to the reign of Niuserre. It is attested in only six examples, however; and while three of them occur with the name of Niuserre, one occurs with Teti (*ibid.*, p. 151).

<sup>23</sup> Harpur, *Decoration in Egyptian Tombs*, p. 128 n. 81. She gives no table of occurrences, however, so it is difficult to tell how many examples her dating is based upon.

<sup>24</sup> Harpur, *Decoration in Egyptian Tombs*, p. 41.

<sup>25</sup> *Ibid.*, p. 257.

While Cherpion's criteria yield a possible range from Sahure through Izezi, the features that limit the upper end of the range seem often to extend later.<sup>26</sup> The appearance of Osiris in the offering formula on the architrave makes a date before Izezi improbable. Note that the tomb's Phase ii date is somewhat tentative; it may also date to Phase iii.

g 2099 Raramu serdab Date: Izezi–Unis?

The serdab in which these statues stood seems likely to have been built as part of the (re)construction of the southern half of 2099 after the construction of the support wall for 2098's corridor. Supporting this later date are the references to Khufu and the occurrence of the title *wꜣb nswt* on the statues, both of are best paralleled in the cluster towards the end of Phase ii. The poor-quality relief sculpture on either side of the chair of one statue could be inferior work of any period, and the parallel serdab group from 2009,<sup>27</sup> which these statues closely resemble, is dated only from the mid- to late Fifth Dynasty.

**Phase iii**  
g 2098 Nefer-khuwi Date: Unis or slightly before

The date applies only to the decoration, which is clearly oriented in anticipation of a southern approach, and thus would date to Phase iii. (The building itself is probably a construction of Phase ii.) Although the chapel has several late features rare in the other mastabas of the cluster (a visible chair back under a cushion, chairs with lions' rather than bull's legs), it probably does not date beyond the end of the Fifth Dynasty, since it contains a procession of alternately male and female personified estates, a feature that disappears at the end of the Fifth Dynasty. The text over the carrying chair scene is also closely paralleled in two other tombs of the late Fifth Dynasty, so the reign of Unis seems the most likely date.<sup>28</sup>

g 2088.1 Pehen-Ptah Date: Izezi–Unis

The last set of modifications to this tomb, associated with the son of the original owner, must date to Phase iii. None of the known occurrences of the reversal of the tomb owner on the door jamb dates later than the latter half of the Fifth Dynasty.<sup>29</sup>

**Phase iv**  
g 2097 x Mernetjer-Izezi Date: Izezi or later

The only one of Cherpion's criteria that applies to this intrusive figure is the *shꜣm* scepter without a papyrus umbel at the base of its blade. According to Cherpion's analysis, this feature is characteristic of the reign of Niuserre or earlier; however, such a dating is contradicted by the name of the man represented.

<sup>26</sup> According to Cherpion's appendix, the three criteria that apply to this tomb in fact occur in tombs with royal names later than the date ranges Cherpion gives. An armchair (#7) occurs in tombs with the names of Unis and Teti; furniture with a bull's legs rather than a lion's (#10) occurs with the names of Teti and Pepi i; and the bread on the offering table of middle height (#17), though it occurs only once with the name of Izezi in Cherpion's list, also occurs in 2097 in this cluster.

<sup>27</sup> E. Brovarski, in D'Auria et al., eds., *Mummies and Magic*, pp. 88–90; and Smith, *HESPOK*, pl. 24, b–e.

<sup>28</sup> See Roth, "The Practical Economics of Tomb Building," pp. 235–48.

<sup>29</sup> Harpur, *Decoration in Egyptian Tombs*, p. 53, n. 49–50.



g 2092a Nimaatre/Tut

Date: Teti–Pepi i

The three pairs of side panels, Cherpion's criterion #55, only limit the range of dates between the reigns of Izezi and Pepi i; however, the overall style of the carving argues for a Sixth Dynasty date.

These analyses lead to the conclusion that Phase i began in the reign of Niuserre (or slightly later) and ended early in the reign of Izezi. Phase ii may have begun during the reign of Izezi and ended late in the same reign or early in the reign of Unis. Neither the decoration of 2098 or that of the extension to 2088, both dating to Phase iii, can date later than the last reign of the Fifth Dynasty; so both probably date to that reign or slightly before. The decorated tombs of Phase iv seem to date from the end of the Fifth Dynasty through the reign of Pepi i. The fact that the taboo against obstructing access to earlier tombs seems to have been abandoned at about the time of the change of dynasty may be significant.

That construction in the cluster began during or soon after the reign of Niuserre is especially interesting in view of Jacquet-Gordon's conclusion that this reign marked a new era at Giza, in which officials of contemporary kings began once again to be buried there.<sup>30</sup> Her conclusion is based on the evidence of funerary estates formed on the names of contemporary kings, which imply that the occupants of the tombs served the kings named. Such evidence is lacking at Giza for Fifth Dynasty kings until the reign of Niuserre. The same reign may also have marked institution of a cemetery restricted to holders of the newly instituted office of *hntj-š*, of which the tomb owners in this cluster must have been among the first.

## Later Activity in the Cemetery

Activity in the area after the construction of the cluster was completed at the end of the Fifth Dynasty is not precisely datable, but most of it seems to have been destructive. A good deal of stone robbing can be deduced for the cluster, probably mostly of granite elements. There is no granite presently in place in the cluster; but granite fragments were noted in the fill, and at least two chapels, 2097 and 2099, must have had lintels of granite or some other hard stone to support the roofs of their chapels, since the spans are too great for limestone.

Another significant circumstance is the number of false doors and adjacent chapel walls that are preserved only to the height of the false door tablets. This suggests that the walls were dismantled to this height, and a granite lintel removed. False doors with missing lintels include the doors of 2093, 2095, and 2231; all three false doors of 2088; the southern doors of 2089 and 2097; and the northern door of 2098. The fact that the more prestigious (and hence usually more richly decorated) southern doors are more likely to be lacking a lintel suggests that more expensive stone was used in their construction, and made them attractive targets for stone robbery. The southern false door of 2098, as well as the false door of 2097, is missing altogether. These are among the most richly decorated tombs in the cluster, and both also date to the very end of the Fifth Dynasty, a period when expeditions to Aswan and further south seem to have become

increasingly commonplace.<sup>31</sup> It is possible that both of these false doors were of granite.

The contents of three serdabs also seem to have been forcibly removed, though apparently not for reuse, since they were found broken near by. The largest concentrations of model fragments were found in and near the two serdabs of 2088, indicating that they were originally deposited there. Since most roof blocks of these serdabs were found in place, the models and other objects were almost certainly broken by the people who removed them, who also appear to have tossed some of the pieces into other parts of the cemetery. The motive for this destruction is difficult to fathom, unless it was frustration that the serdabs contained nothing more valuable. It seems to have taken place sometime after the construction of the intrusive tombs of Phase iv, since the excavation photographs show that wall blocks belonging to 2088's chapel were found beneath the models, separated only by a thin layer of drift sand, and access to the intrusive mastaba 2088b was obstructed by these blocks (see pl. 5a). The blocks themselves, many of which are decorated portions of 2088's inner L-shaped chapel, seem to have been removed from their original location soon after the cessation of the cult of the owner of 2088, since the blocks appear to lie close to the base of the walls. The destruction in this tomb thus probably occurred before the end of the Old Kingdom.

Most of the other broken models and statues were excavated in the fill above and around 2230, 2231, and 2240; they may have belonged to the serdab of 2240. Directly in front of the mastaba was a headless statue of a seated scribe; the Reis's Diary notes that several days were spent looking for the head but it was not found. This statue was probably also originally in the serdab. Although this serdab did not have an intact roof when excavated, the dispersal of its contents is similar to the that in 2088, so it may have been subjected to the same treatment.

Two serdabs escaped this destruction: 2099, which was found intact, and 2086, where the bases of the four plaster-coated and painted statues remained in place and the destruction was due to natural decay of their wooden cores. That these unlooted serdabs belonged to tombs on the less accessible north side of the cluster, while the broken and dispersed statues belonged to tombs along the much-traveled southern path, suggests that the destruction resulted from the casual hooliganism of passersby after the abandonment of these tombs and their cults. The goal of such passersby was presumably tombs west of g 2000 with cults that were still active; this supports the conclusion reached above that the destruction of the chapel of 2088 and the opening of its two serdabs dates no later than the late Old Kingdom.

Another destructive activity in the cluster, the plundering of the tomb shafts, may have occurred at about the same time. This robbery seems to have been surprisingly uneven. Seven principal (subterra-

<sup>30</sup> Jacquet-Gordon, *Noms de domaines funéraires*, p. 17.

<sup>31</sup> The later autobiography of Harkhuf refers to a dwarf brought from equatorial Africa during the reign of Djedkare Izezi, indicating royal activity in the south of Egypt during this period. In the succeeding reign, the causeway of Unis depicts the transport of granite architectural elements from Elephantine for the adjoining mortuary complex. Granite may have been transported in greater quantities during the late Fourth Dynasty, but most was probably intended for the use in royal monuments.

nean) shafts were left intact, as were all eleven shafts in 2085 and both shafts of 2089a. This was not a result of the tombs' geographical position, since adjacent tombs (2095' and 2097 in one case, and 2091 in the other) were robbed quite thoroughly. It might be argued that this pattern is a result of cults that continued to be active longer than those of the surrounding tombs. However, four burials, including the principal one, survived in the five shafts of 2089,<sup>32</sup> which seems to have been abandoned before the end of Phase ii and had four intrusive shafts in and around its chapel. g 2099, which was partially razed and built over by the end of Phase ii, showed three intact chambers out of five, including the principal burial.<sup>33</sup>

Eight tombs had no burial chambers that survived intact, among them the largest mastabas: 2091, 2092+2093, the 2096–2097–

2097a massif, and 2230. There is no simple explanation for this pattern, which probably resulted from a number of factors. Careful analysis of the fill of the robbed shafts might have suggested reasons for the distribution of intact and robbed shafts.

There is surprisingly little evidence for activity in the cemetery after the end of the Old Kingdom. Some surface ceramics collected (for example the three-handled flask and incised bowl from 2088) attest to later visits. An unregistered ceramic sherd, perhaps from the neck of a jar, had distinct rilling lines from wheel turning on the interior, and was covered with a white slip and traces of the light blue paint that is typical of Eighteenth Dynasty court ceramics. (It was noted but not drawn, since its provenience within the cluster was impossible to determine.) Such later ceramics are, however, the exception. There was, in fact, a surface deposition of several meters' depth over most of the cemetery; but it was entirely removed in the late 1930s by Reisner's workers, and the evidence for later activities at the site was probably removed with it.

<sup>32</sup> Here and elsewhere in this section I counted only shafts with chambers or in which evidence of a burial had been found. "Intact" shafts include those shafts (four in the cluster) where the blocking was intact but no burial was found.

<sup>33</sup> It is possible, however, that some or all of these burials were not original but represented reuse of the empty shafts in connection with the new serdab.

## Chapter 3: THE TOMB OWNERS

The owners of the tombs in this cluster are accessible to us in two ways: through the texts and depictions of their tombs' decorated chapel walls and through the remains of their bodies, interred in the shafts of the mastabas. The owners of undecorated tombs, and the people other than the principal tomb owner, are normally accessible only through these remains.

### Human Remains

The human remains from the cluster might have been among the most important source of information about the tomb owners; but, unfortunately, it has not been possible to locate them. Since the skeletal material was apparently never sent to the United States, it may still be stored in Egypt, perhaps somewhere on the Giza plateau.<sup>1</sup> As the shafts were excavated, the human remains were evaluated by Dr. Derry, a Cairo physician who worked with Reisner,<sup>2</sup> but no evaluations from this cluster were found in Dr. Derry's notes (now in Boston).

Allison Webb Willcox has made a determination of the probable ages and sexes of some burials in cases where the excavation photographs showed diagnostic details. These determinations are often tentative, because they are based on isolated indicators such as the development of the supraorbital torus. For the benefit of readers interested in evaluating her conclusions, I have included all of the excavation photographs of burials that I could locate, with the exception of those where the skeletal material is very fragmentary. Ms. Willcox's conclusions are detailed in the plate captions for the convenience of such readers.

Out of 123 shafts, 51 tomb chambers contained some human remains, presumably of single individuals. The expedition records describe eight skeletons as "children;" two as "young;" and three as "small." Ms. Willcox's survey of the photographs cast considerable doubt on the usefulness of these notations as age estimates, since most of the bodies so labelled that were recorded in photographs appeared to be skeletally adult. Three of the four photographed burials called "children" are skeletally adult: 2088b a, 2095 e(i), and 2095 e(ii); there was insufficient evidence to determine the status of the fourth (2097 f). The four unphotographed burials cannot therefore

be assumed to be children. All three skeletons described as "small" were photographed: one (2089a a) is skeletally adult; a second (2099 f) may be a young adult, and the third (2094 e) was judged to be between eight and twelve years old. Only one of the two "young" burials was photographed, and it was also skeletally adult. However valueless as age determinations, however, these descriptions offer useful clues to the size of the skeletons, since unfortunately, there are no scales in the excavation photographs of these burials.

Given the assumed rate of infant mortality in the Old Kingdom, based on that of other pre-modern societies, there must have been a significant number of children who died in infancy. None of the skeletons labeled "small," "child," or "young" that were recorded photographically are necessarily younger than age eight, and most of them are skeletally mature. It is therefore unlikely than any of the unphotographed skeletons were much younger. Infants and very small children were thus probably not buried in the cluster, or at least not in burial chambers entered through the lined shafts that were detectable by Reisner's excavation techniques.

On the other hand, several of the burials recorded in the photographs showed characteristics often associated with old age, that is, advanced tooth wear and osteoarthritis. Four of the photographed burials showed such characteristics: 2095 a (extreme tooth wear, significant cervical osteoarthritis, lipping on the lumbar vertebrae and perhaps also on the head of the right femur), 2088 f (moderate to severe osteoarthritis), 2098 b (significant tooth wear), and 2098 y (significant loss of lower, and perhaps also upper, teeth). These signs of aging indicate that at least some of the people buried in the cluster lived beyond the prime of life.

The cluster contained one case of an obvious skeletal abnormality. The burial in the secondary shaft 2231 f, described by the excavators as an adult, exhibited an abnormal growth of the bone on the right femur, which is clearly visible in the photograph (pl. 120b).

Because of the absence of the human remains and the incompleteness of the photographic record, most of the information about individual tomb owners in the cluster must be based on textual evidence.

### Names in the Cluster

About sixty-five different names are attested in the cluster. One common feature among them is the comparative rarity with which they incorporate divine and royal names. Only 12 names are built on the names of gods. Ptah, Re, and Hathor are the most popular deities for men and women, with four, three, and two namesakes, respectively. The gods Khnum and Min are represented by one name each. A woman depicted on the northern false door in 2091 may also be named for the goddess Neith, in whose cult the tomb owner's wife served. If the name of the owner of 2092+2093 is to be read Geb-ib rather than Za-ib, then the god Geb is also represented here, but this divinity does not occur elsewhere in theophoric names in the Old Kingdom.

The four basilophoric names that are attested are built upon on the name of Izezi (Mernetjer-Izezi, the usurper of 2097) and upon the name of Khufu (Nefer-mesdjer-Khufu, the owner of 2240; Mery-

<sup>1</sup> Dr. Zahi Hawass recently discovered a cache of pottery and skeletal material from earlier periods of Reisner's excavations stored in tomb chambers in the western part of the Western Cemetery (Z. Hawass, personal communication).

<sup>2</sup> See J.L. Smith, *Tombs, Temples and Ancient Art* (Norman, Oklahoma, 1956), pp. 190-91, for an account of the expedition's practice with skeletal materials.

Khufu, his son; and Khufu-seneb, an attendant in 2098). The three names built on the name of Khufu are clearly not contemporary with that king, since the chapels in which they appear were demonstrably built in the late Fifth Dynasty; it is perhaps significant that they all appear in tombs dating to the end of Phase ii, suggesting a renewed interest in the patron of the entire cemetery at this period.<sup>3</sup>

The elements *ntr* and *nswt* are as rare as their more specific analogues. Each occurs only twice in the cluster. By comparison, other elements are far more frequent. *K3* and *nfr* each occur in nine names in the cluster; *mr* and *nh* occur six times, and *hw* occurs four times.

Two names in the cluster may reflect their bearers' foreign origin. One probable non-Egyptian is Raramu (*R-r-mw* who was represented with his wife, daughter, and sons in the serdab statuary of 2099. This man apparently also used the more Egyptian name Nikau-Ptah,<sup>4</sup> although it appears on only one of the statues, while Raramu appears on three. His name is written with two groups of *r* followed by determinative stroke, and with the triple-*n* sign "water," both of which are common in Middle Kingdom group writings of foreign names.<sup>5</sup> These group writings are common in Asiatic personal and place names,<sup>6</sup> but this combination of consonants would not tend to occur together in a Semitic name.<sup>7</sup>

The other name belongs to an attendant with the title *hntj-š*, depicted in 2098. It makes no sense in Egyptian, suggesting a foreign origin. It is to be read either *Nsttj* or more probably *Nhsttj*. The ending *tj* is normally a feminine ending in Semitic names, but it does appear as the ending of a male name in the execration texts.<sup>8</sup> It may, however, be simply a nickname, since the man is apparently a son of the tomb owner, Nefer-khuwi.

## The Title *hntj-š* and the Hierarchy of the Tomb Owners

In addition to owning tombs in the same part of the Giza necropolis, the tomb owners had in common the title *hntj-š pr-š*, "palace attendant," or one of its supervisory levels. Not only is this title almost universal among the tomb owners, but it is often also applied to the children and retainers depicted on their chapel walls. Fig. 11 shows the distribution of tombs of *hntjw-š pr-š* and their supervisors within the larger Western Cemetery, demonstrating that the cluster studied here indeed represents an unusual concentration of such officials, though it is by no means the only part of the Giza necropolis where holders of this title could be buried during this period.

The title *hntj-š* was an innovation of the late Fifth Dynasty. Invariably, it was qualified by reference to a building rather than a person: either to the palace (*pr-š*), as in this cluster, or to the mortuary temple of a king. Between the reigns of Niuserre and Menkauhor, the titles of *hm-ntr*, which had previously been followed only by a royal or divine name, began instead to be attached to a royal mortuary temple, *hwt*, or *mrt* shrine.<sup>9</sup> This change may have coincided with the initiation of the title of *hntj-š*.<sup>10</sup> Most bearers of the palace title in the late Fifth Dynasty seem to have been buried at Giza: only in the Sixth Dynasty do they begin to be buried at Saqqara with any frequency.<sup>11</sup>

The comparative rank of the supervisory levels of this office are known,<sup>12</sup> so that the tomb owners' ranks in the hierarchy are known. The principal supervisory titles in this sequence are, from highest to lowest:

<i>jmj-r hntjw-š pr-š</i>	overseer of palace attendants
<i>jmj-r st hntjw-š pr-š</i>	assistant overseer of palace attendants
<i>shd hntjw-š pr-š</i>	inspector of palace attendants
<i>jmj-ht hntjw-š pr-š</i>	assistant inspector of palace attendants

These translations of the supervisory levels are arbitrary: the Porter and Moss *Topographical Bibliography*, for example, uses with equal justification the sequence "overseer," "overseer of the department," "inspector," and "supervisor." The translations adopted here do not necessarily reflect the literal meaning of the Egyptian, but instead were chosen to make the places of the titles' holders in the hierarchy clearer: inspectors see, and are thus inferior to overseers, who oversee; the assistants rank just below the main titles. The two titles translated "assistant" are much less common than the other two titles, suggesting that these levels of the hierarchy were not always filled.

<sup>3</sup> In fact, with the single exception of Mernetjer-Izezi in this cluster, I can find no *hntj-š* at any level of the hierarchy buried at Giza with the name of a king other than Khufu. Bolstering the notion of a connection between the title and the Fourth Dynasty king is the fact that Giza, and particularly the Western Cemetery, was the primary, perhaps exclusive, burial place of Fifth Dynasty holders of the office (see below).

<sup>4</sup> This name appears with titles otherwise attested for Raramu on a pair statue. The two figures do not interact, and presumably represent the same man. The boy between them is labeled "his son."

<sup>5</sup> K. Sethe, *Die Ächtung feindlicher Fürsten, Völker und Dinge auf altägyptischen Tongefässchen des Mittleren Reiches* (Berlin, 1926), p. 29.

<sup>6</sup> *Ibid.*, pp. 46–55.

<sup>7</sup> E.K. Rowson, personal communication.

<sup>8</sup> *Jj-kw-ḏdi's son m-mw-tj*. Sethe, *Die Ächtung feindlicher Fürsten*, p. 49.

<sup>9</sup> For clear illustrations of this, see the index of titles connected with "kings," B. Porter, R. Moss, and J. Malek, *A Topographical Bibliography of Ancient Egyptian Hieroglyphic Texts, Reliefs and Paintings* iii, 2nd ed. (Oxford, 1974–1981) (hereafter *PM 3<sup>1</sup>*), p. 938, and the chart in K. Baer, *Rank and Title in the Old Kingdom* (Chicago, 1960), p. 253, Table ii, lines 1–4. (Lines 8 and 11, the only titles attested after the reign of Niuserre, connect the royal name with a *hwt* or a *hwt-ks*.) Baer discusses the date of this change, which he concludes follows the reign of Niuserre, on pp. 264–65.

<sup>10</sup> *Ibid.*, p. 250, Table i, lines 14–17. Baer dates the appearance in tombs of this title in connection with royal cults to the reign of Unis (pp. 272–73), but notes that its presence in the Abu Sir papyri means that it was probably introduced before the death of Djedkare Izezi.

<sup>11</sup> *PM 3<sup>2</sup>*, Appendix G, pp. 918–29 and 931. This appendix lists 36 proprietors of monuments at Saqqara who hold the title *hntj-š* in a context other than a royal mortuary temple. Of these, only two may date before the beginning of the Sixth Dynasty: a statue in the British Museum dated to the Third or Fourth Dynasty by E.A.W. Budge, which is certainly later (*PM 3<sup>2</sup>*, p. 728) and part of a Fifth Dynasty false door, now in Copenhagen (*PM 3<sup>2</sup>*, p. 739). Neither of these monuments is in its original context. In contrast, of the 42 tomb owners with similar titles at Giza from the Fifth and Sixth Dynasties, all but 14 may be placed in the Fifth Dynasty. Those that must date to the Fifth Dynasty concentrate in cemeteries 2000 (6, in addition to the tombs studied here) and 4000 (2) in the Western Cemetery, and in the Central Field (4). No palace *hntjw-š* are known from the Eastern Cemetery at any period. (The appendix does not necessarily include all holders of the titles, however, since only those listed in the bibliography are indexed.)

<sup>12</sup> Although W. Helck, *Untersuchungen zu den Beamtentiteln des ägyptischen Alten Reiches*, ÄF 18 (Glückstadt, 1954), p. 107, expressed some doubt about the rank of the upper two levels; R. Stadelmann, "Die *hntjw-š*, der Königsbezirk *š n pr-š* und die Namen der Grabanlagen der Frühzeit," *Bulletin du Centenaire*, Supplément au BIFAO 81, (1981), pp. 156–57 and p. 157, n.1, has argued for the order used here. In addition, the comparative sizes of the tombs of the holders of various ranks in this cluster are entirely consistent with the hierarchy as Stadelmann described it.

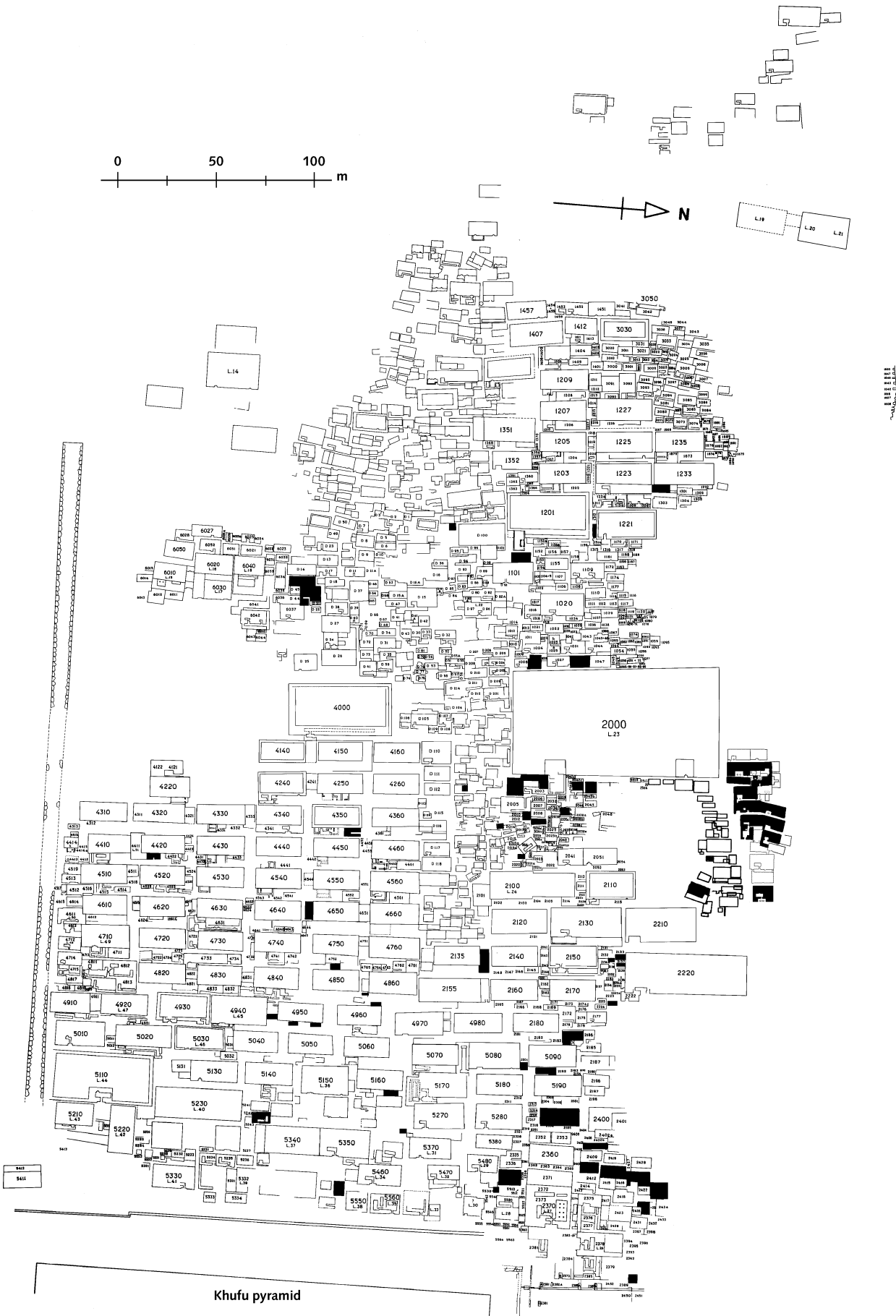


Fig. 11. A plan of the Western Cemetery at Giza, showing the tombs of palace attendants in black.

The translation of the title *hntj-š* as “attendant” is unorthodox. The most common translation of this title, “tenant” or “tenant-landholder,”<sup>13</sup> derives from an exemption decree for the cult of Snefru, in which holders of the office are recorded as having the right to cultivate the lands of Snefru’s funerary endowment. The publication and analysis of the Abu Sir papyri has clearly demonstrated that the role of *hntjw-š* in the royal mortuary cult was more closely involved with daily rituals than had previously been believed.<sup>14</sup> As a result, P. Posener-Kriéger has suggested the translation “employé.” The more specific term “attendant” has been favored here, because it suggests the relationship of personal service to the king that seems to be the distinguishing feature of the office. People who held the title *hntj-š* were also attached to royal mortuary temples, where they performed services for the deceased king that derived from the human side of his nature: transporting food, and dressing and feeding his cult statue. Their function complemented that of the more priestly *hmw-ntr* at the same temples, who were responsible for censuring and other activities that paralleled the rituals performed for divinities.<sup>15</sup> Just as the services of the *hmw-ntr* were equivalent to the services that people with the same titles performed for the gods, so the personal services the *hntjw-š* did for the dead king probably reflected the services performed for the living king in the palace by functionaries with the same title.

### The Title *hntj-š* and Musicians

The tombs themselves offer some clues to the nature of the title. One striking feature is the prominence of musicians in the decoration of all but two of the chapels. The exceptions are 2092+2093 and 2098, the chapels of the two men who held office in the highest level of the hierarchy and who by virtue of their higher positions might have been less involved with this aspect of court life. However, a fragment depicting musicians was found in 2092+2093, which does not fit any of the surviving scenes in other tombs. It is perhaps to be restored on the south wall of 2093. The south wall was the most common position for such scenes (2086, 2091, and twice in 2097), although they were also placed on the east (2088) and west (2240) walls. In the case of 2098, however, there is no place on the south wall or elsewhere in the chapel where such a scene might be restored.

Other titles that occur in the tombs also hint at a connection between *hntjw-š* and palace musicians. In 2091 one of the attendants bears the title “singer of the palace” and in 2086 the tomb owner himself seems to bear a title connecting singers with *hntjw-š*, ... *hst n hnt...*, perhaps “... of singers of the *hntjw-š*.”

A more subtle connection is seen in 2098, where the tomb owner, an overseer of palace attendants, claims to have exercised his office *m hnw šts pr-š*, “in the inner secret places of the palace.” This phrase is paralleled only once in the Old Kingdom, in a tomb in the Central

Field at Giza. This tomb belonged to a contemporary overseer of palace singers, Nimaatre, and also contained a carrying chair scene very similar to that in 2098.<sup>16</sup>

This professional connection with musicians and entertainment may also explain the representation of family members as musicians in banquet scenes in 2088, a type of participation that does not become common until the Sixth Dynasty. In her analysis, Y. Harpur correlates this feature with children who take an active part in marsh scenes,<sup>17</sup> and notes that, although both occur first in the reign of Izezi, they are quite rare (four examples of both types) before the Sixth Dynasty. That such a scene occurs in this cluster may indicate that the children were being trained to succeed their parents in a position that required a knowledge of music.<sup>18</sup> Personal attendants upon the king may thus have had the responsibility of entertaining him with music, or at least have been required to work closely with court musicians. Two ordinary *hntjw-š pr-š* buried outside this cluster bear musical titles: Senankhwer was a flautist;<sup>19</sup> and Khufuankh was both an overseer of flautists and of palace singers.<sup>20</sup>

### Other Clues to the Nature of the Title *hntj-š*

In view of the traditional translation of the title *hntj-š*, it is perhaps also worth noting that scenes of cultivation, which one would expect to be the main preoccupation of the lower levels of “tenant-landholders,” occur rarely in the cluster. Only four tombs (2092+2093, 2091, 2240, and 2097) have such scenes, and except for 2097, none of the owners of these chapels belongs to the three lowest ranks of *hntj-š*, the levels where one would expect agricultural ties to be the strongest if the traditional translation is correct. Instead, this distribution probably reflects the fact that richer members of the hierarchy were more likely to possess land. It may also reflect the greater quantity of wall space available in the larger chapels of the higher ranking men, and hence the greater variety of scenes in their tombs.

Roles of the *hntj-š* may also be suggested by the combination of titles on the two architraves of 2091, which were apparently discarded at the beginning of Phase ii. The owner of 2091, Kapi, clearly has the title *jmj-r st hntjw-š* in the wall decoration of his chapel, but that title does not appear on the discarded architraves. Other palace titles do, however: *jmj-r mdw pr-š* (“overseer of tens of the palace”), *jmj-ht pr-š* (“assistant inspector of the palace”), and *jmj-r wpw(t) pr-š* (“overseer of palace messengers”). These titles, which occur on decoration of Phase i, perhaps represent typical offices held by an official whose title became *jmj-r st hntjw-š* when that title was first introduced, probably sometime during the reigns of Niuserre or Menkauhor.<sup>21</sup>

<sup>16</sup> S. Hassan, *Excavations at Giza 2* (Cairo, 1936), pp. 202–5, figs. 223–51, and pls. 77–83. These two tombs have many other decorative and textual similarities, discussed in Roth, “The Practical Economics of Tomb Building in the Old Kingdom.”

<sup>17</sup> Harpur, *Decoration in Egyptian Tombs*, pp. 136 and 332 (chart 6.13).

<sup>18</sup> Another high-ranking *hntj-š*, Seshem-nefer (*PM 3<sup>2</sup>*, p. 614, in the Unis cemetery) also depicts family members playing the harp for him. (Barsanti, *ASAE 1* (1900) p. 153, fig. 9.)

<sup>19</sup> This title is recorded on a statue from g 2475, now in the Royal Ontario Museum, Toronto (949.42), according to *PM 3<sup>2</sup>*, p. 95.

<sup>20</sup> These titles are recorded on his false door in the Museum of Fine Arts, Boston (21.3081), according to *PM 3<sup>2</sup>*, pp. 129–30.

<sup>13</sup> *PM 3<sup>2</sup>*, passim, and H.G. Fischer, *Dendera in the Third Millennium B.C.* (New York, 1968), pp. 170–71, for example.

<sup>14</sup> P. Posener-Kriéger, *Les Archives du temple funéraire de Néferirkarê-Kakai ii*, BdE 65 (Cairo, 1976), pp. 577–81.

<sup>15</sup> For more detailed argument on this point, see A.M. Roth, “The Distribution of the Old Kingdom Title *hntj-š*,” *Akten des vierten internationalen Ägyptologenkongresses, München, 1985* Beihefte zu Studien zur Altägyptischen Kultur 4 (Hamburg, 1991), pp. 177–86.

The older titles suggest a concern with the staff responsible for the practical functioning of the palace (messengers and “tens,” the palace equivalents of divisions of construction workers), which is in line with the translation of the title adopted here.

These titles are attested elsewhere in connection with the title *hntjw-š*.<sup>22</sup> The most closely connected seems to be *jmj-r wpwt*, which occurs independently among the titulary of an inspector and an assistant overseer of palace attendants.<sup>23</sup> Two other men bear the composite title *jmj-r wpwt hntjw-š pr-š*,<sup>24</sup> a combination that is even more common when attached to royal pyramids.<sup>25</sup> A connection between the two titles also correlates well with the references to *hntjw-š* undertaking missions to Upper Egypt to bestow gifts of the king, which occur in late Old Kingdom provincial biographies.<sup>26</sup>

The connection with overseers of tens is interesting in view of the fact that “tens” occur in work crews as the unit of organization below that of a phyle;<sup>27</sup> in temples and probably in the palace, *hntjw-š* were organized into phyles.<sup>28</sup> Two men besides Kapi bear this combination of titles.<sup>29</sup> A third title of Kapi, *hrj-pr* occurs on one of his false doors in connection with the title *hntj-š*. (The title is written *n pr-š hntj-š hrj-pr Kspj*, but it is presumably to be read *hrj-pr n hntjw-š pr-š*. The *pr-š* has brought the entire *hntj-š* title forward in honorific transposition.) This title is similarly combined in the tomb of Dua-Re.<sup>30</sup> Perhaps the most interesting parallel use of these titles occurs in the tomb of Khnumhotep,<sup>31</sup> where the title *jmj-r st hntjw-š pr-š* occurs in the chapel itself, while two palace titles, *jmj-r wpwt pr-š* and *hrj-pr pr-š*, occur on the lintel, resembling the distribution in 2091.

Another title that may be relevant to the office of *hntj-š* is the title *jmj-r šwj pr-š*, “overseer of the two š’s of the palace.” It is attested

in two tombs dating to the end of Phase ii, that of an overseer, 2098, and that of an assistant overseer, 2240. This title presumably refers to the same š that occurs in the title *hntj-š*, although the titles may have been otherwise unrelated.<sup>32</sup> The occurrence of this comparatively rare title in two of the tombs of this cluster, however, suggests that there was still some connection between these two mysterious functions.<sup>33</sup>

Several of the tomb owners hold more than one title in the hierarchy, presumably as the result of promotions they received in the course of their careers. Such promotions seem always to occur sequentially (there are no gaps in the sequence of titles attested in a single tomb). Promotions from one level of the hierarchy to the level above may have been the occasion for enlarging and elaborating the tomb, as it seems to have been elsewhere at Giza.<sup>34</sup>

## Family Relationships of Tomb Owners

*Sons.* That there are few apparent father-son relationships between the owners of tombs in this cluster throws some doubt upon the general assumption that the location of tombs was largely determined by family relationships. There is, for example, no case in which the owner of one tomb can be shown to have the same name as the son of another. In 2088, however, a son has enlarged his father’s tomb and was presumably buried in one of its shafts. There is a representation of a man named ...khu in 2091 and a son with the same fragmentary name in 2088.<sup>35</sup> One or both of these men might be equated with the owner of the later mastaba 2098, Nefer-khuwi; but other restorations of these names are equally possible.

Another man who may be a son of an earlier tomb owner is Nimaatre, the owner of 2097. Although Nimaatre is not shown in any surviving representations in 2092+2093, the tomb of Za-ib, the architectural relationship of the two tombs and certain relationships suggested by their decoration (discussed below), make it likely that Nimaatre was a son or another close dependent of Za-ib.

Another relationship between the tombs is shown by the occurrence of sons or ka-priests of one tomb owner as ka-priests or attendants in neighboring tombs. Such connections would have some practical advantages. As sons, these men would be carrying out mortuary rites for their fathers, and a contract to provide similar services at a tomb in the same area would have cost very little extra work. There are only four such relationships, however, and most of them are tenuous.

- (1) Nen-ankh, eldest son of Redi, the owner of 2086, appears with the title ka-priest on a model in the neighboring tomb 2088, where he is

<sup>21</sup> Baer, *Rank and Title in the Old Kingdom*, pp. 272–73, has argued that the *hntj-š* titles attached to royal mortuary temples were not used until the reign of Djedkare-Izezi and are not attested in monuments until the reign of Unis. The title seems to have been introduced several reigns earlier in the palace, to judge from the dates of the tombs of this cluster. This lag between the adoption of the title in the palace and its appearance in royal mortuary temples might explain the lack of the *pr-š* designation in so many of the occurrences here: for a while the palace was the only venue in which the title was used. It probably continued to be the unmarked form, so that members of the *hntj-š* hierarchy with no attachment to a building specified can usually be assumed to have been *hntjw-š* of the palace. The palace officials are much better attested than their colleagues at mortuary temples, implying that they were probably considerably richer and in a better position to build tombs. Such a difference can easily be attributed to the advantages of working for a powerful living patron rather than a dead king. As Baer has shown, however, the title of a *hntj-š* attached to the mortuary cult of the reigning king outranked all other titles.

<sup>22</sup> As with the early *hntj-š* titles, tomb owners with these titles are found overwhelmingly at Giza rather than Saqqara, regardless of whether they also bear the title *hntj-š*.

<sup>23</sup> *PM 3<sup>2</sup>*, p. 94 (Min-nefer) and p. 165 (Khnum-hotep). Min-nefer, the owner of g 2427, may be the brother represented on the central pillar in Kapi’s chapel. A third overseer of messengers, Snefru...hetep (*PM 3<sup>2</sup>*, p. 898), attested on an obelisk of Sixth Dynasty date, has no surviving *hntj-š* titles, but is called “overseer of the five... of the great house,” perhaps a reference to the five phyles into which *hntjw-š* were divided.

<sup>24</sup> *PM 3<sup>2</sup>*, p. 109 (Werbaure) and p. 153 (Khufu-seneb ii).

<sup>25</sup> *PM 3<sup>2</sup>*, p. 923, titles 414–16. This title is attested for officials at the pyramids of Izezi (1 example), Teti (1 example), and Pepi i (2 examples).

<sup>26</sup> For example, *Urk. 1*, p. 146.10.

<sup>27</sup> A.M. Roth, *Egyptian Phyles in the Old Kingdom: The Evolution of a System of Social Organization*, SAOC 48 (Chicago, 1991), pp. 120–21.

<sup>28</sup> *Ibid.*, pp. 193–94.

<sup>29</sup> *PM 3<sup>2</sup>*, p. 152 (Ked-nes) and p. 736 (Teti).

<sup>30</sup> *PM 3<sup>2</sup>*, p. 287.

<sup>31</sup> LG 38, as listed in *PM 3<sup>2</sup>*, pp. 164–65.

<sup>32</sup> The occurrence of š in different titles has been differently interpreted. “Overseer of the š’s is conventionally translated “overseer of quarry work,” while “overseer of the two š’s” is translated “overseer of the two weaving rooms.” (Posener-Krieger, *Les archives du temple funéraire de Néferirkarê-Kakai*, p. 578 nn. 2–3.) It seems unlikely that these titles are so unrelated.

<sup>33</sup> The title also occurs in the tomb of another high ranking *hntj-š* at Giza, that of *Jmj-st-ks* (g 4351).

<sup>34</sup> See A.M. Roth, “Cat. 14. Mastaba chapel of Akh-Meret-Nesut and his Family,” in S. D’Auria et al., eds., *Mummies and Magic*, pp. 83–87, esp. p. 86. In this chapel (g 2184), each of the two extensive additions to the chapel was decorated with a titulary that included a new title.

<sup>35</sup> These very faintly preserved signs, under a fragmentary *zš/zst.f*, occur between a man and a woman. They may belong to either.

represented cutting up a goose. g 2086 is almost exactly contemporary with the earliest serdab of 2088. Ka-khent, the owner of 2088, was a step higher in the hierarchy than Redi.

- (2) The name Kapa-mes, which appears on the false door of Kapi in 2091, might be equated with the man named Kapa... represented censing before the tomb owner on a block of Za-ib, the owner of 2092+2093. Neither of these names is accompanied by an indication of any relationship to the tomb owner. Furthermore, it is possible that the word *kps* on the block of Za-ib is not a name at all, but the beginning of a caption, *ksp*, "censing..." while the *kps-ms* in 2091 might be interpreted as *msw Kspj*, "the children of Kapi." This latter reading is not likely, however, since the inversion would be curious, the tomb owner's name is never written *kps* elsewhere, and one of the other figures on the door is identified as Kapi's sister rather than a daughter. The other figures on the false doors are called *hm-ks*, so the figure of Kapa-mes would be anomalous in any case for its lack of a title. It is unlikely that he is a son, as no son is represented elsewhere in the tomb (on doorjambs, for example). The tombs involved, again, are roughly contemporary and are separated by a single step in rank.
- (3) An attendant called Iren... in the carrying chair scene of 2098 may be the same man as Iren-Ptah who is the son of the owner of 2240. Iren-Ptah is given the title of *hntj-š*, and though no title survives for the man shown in 2098, many of the other attendants in the same scene bear that title. g 2098 and 2240 appear to be quite closely contemporary. Iren-Ptah's father was a step lower in rank than the man his son would have served, by this reconstruction. The fact that another attendant in 2098 and a ka-priest in 2240 both have names based on the name of Khufu (Khufu-seneb and Mery-Khufu, respectively) may also point to a connection between these two tomb owners.
- (4) The ka-priest Kaemtjenet, who appears twice on the northern false door of 2091, may also be represented as an offering bearer in 2088, although the name is spelled rather differently. g 2091 is slightly later than 2088, but in both cases the name is incised and may be later than the (raised) chapel decoration. The tomb owners are again separated by a single step in rank.

In all cases the tomb owners who share an attendant are separated by a single step in rank; and in the two cases where the attendant is a son, he is a son of the lower ranking of the two. As heirs of their fathers' offices, it is not surprising that these two men should appear in positions subordinate to their fathers' superiors. The two cases where the relationship is not specified may reflect the same situation.

*Wives and Daughters.* The owners of the principal inscribed tombs in the cluster were all male and all had representations of children in their tombs, presumably their own. There is no case in which a daughter from one tomb appears as a wife in another. Like many Old Kingdom tomb owners, however, several of these men did not include their wives in the program of decoration.<sup>36</sup> Women may have been omitted because they were buried elsewhere; or for more idiosyncratic reasons (death, divorce, distaste). A chronological survey of the tombs in this cluster serves to demonstrate only a general trend towards the omission of the wife in later tombs.

2088 – wife shown, at same scale, on east wall; her name is lost

2086 – wife shown, at same scale, on south wall; her name is lost

2091 – wife, *rht-nswt*; *hmt-ntr Nt Hc-mrr-Nbtj*, shown on column, at same scale

<sup>36</sup> N. Strudwick, *The Administration of Egypt in the Old Kingdom: The Highest Titles and their Holders* (London, 1985), p. 87, notes that none of the female family members of the Ptahhotep-Akhethotep family seem to have been represented. This pattern is quite common, especially at the end of the Fifth Dynasty.

2093 – wife, *hmt-ntr Nt Tntt*, shown, probably on south or west wall, at same scale

2097 – no wife represented

2240 – no wife represented

2098 – much smaller woman shown on west wall; her name was never recorded

In only two tombs, 2091 and 2093, is the woman accompanying the tomb owner specifically identified as his wife. In the other cases, the woman represented with the tomb owner may also be his mother, since mothers were sometimes represented in the same positions that wives were. However, the presence of children in these tombs makes it more likely that it is the wife who is represented. These women were probably identified by name, but the relevant portions of the walls are lost. The woman shown kneeling at the feet of the tomb owner in 2098 may be a daughter, a supposition made more likely by the absence of a name and the small scale at which she is depicted.

In 2086, 2088, and possibly also in 2092+2093, the tomb owner's wife was represented only once. The only clear exception<sup>37</sup> to this is 2091, where Kapi's wife Khamerernebty is shown on the central pillar and on both walls of the corridor. With the possible exception of the woman in 2098, wives were either shown standing with their husbands or seated on the same chair. When seated (2086, 2088), they were represented at the same scale; when they are standing (2091, 2092+2093), the wife is shown only slightly smaller than her husband is, perhaps representing only the actual difference in height. (Children, by contrast, are normally shown at a much smaller scale.)

Wives are never shown on the false doors of their husbands, and with one exception,<sup>38</sup> they do not have false doors of their own. The two tombs in which the wife is clearly absent, 2097 and 2240, both date towards the end of the development of the cluster. The absence is especially striking in 2097, which shares this feature, like so many others, with the tomb of Ptahhotep ii at Saqqara. In general, the wife seems to be more frequently omitted in tombs of the late Fifth Dynasty than they are in earlier periods.<sup>39</sup>

The most interesting family relationship in the cluster is that suggested by the northern false door of 2097', which belonged to a woman named Tjezet. g 2097' abuts the north face of 2091, a tomb in which a woman also named Tjezet is represented as a daughter. It seems likely that these women are identical. On the central column in 2091, Khamerernebty is shown with her two daughters, Tjezet and another daughter, Meretites, who is clearly younger. On the corridor wall, which was decorated at a later period, a third daughter, Neferkhu-Hathor, is shown standing together with Meretites below a woman whose name is lost, but who was probably Tjezet, suggesting that Tjezet was the eldest daughter, Meretites the middle daughter, and Neferkhu-Hathor the youngest. The title *rht-nswt* occurs on the northern false door tablet from mastaba 2097', and the same title is accorded to Khamerernebty on the 2091 pillar. This would also

<sup>37</sup> Although Za-ib's wife Tjentet is represented only once in the surviving decoration of 2092+2093, the decoration of the central recess is preserved only in isolated fragments, and she may have been shown in more than one scene.

<sup>38</sup> g 2097', to be discussed below.

<sup>39</sup> I presented a more general study of this question, "The Absent Spouse: Patterns and Taboos in Egyptian Tomb Decoration," at the 1994 meeting of the American Research Center in Egypt. A publication of the work is in preparation.



support the assumption that the Tjzet of 2097' was the eldest daughter of Khamerenebty, and inherited her mother's title.

No sons are identified in Kapi's tomb. On his false door panels, only ka-priests, the untitled Kapa-mes, and a sister are represented. The central pillar depicts a brother and men who would seem to be professional colleagues, which also suggests that Kapi had no sons. An unidentified adult man is represented grasping the lower part of Kapi's staff on the eastern corridor wall, but this position can also be occupied by a ka-priest, as shown on the doorjamb of 2240. This man may, however, be the husband of Kapi's eldest daughter, who took on the role of a son by virtue of his marriage into the family. (Perhaps he is even to be identified with the untitled Kapa-mes?) This would explain why Tjzet's husband built 2097', a tomb to the north of Kapi's tomb rather than a tomb near his own family. That Tjzet had her own separate cult place in the tomb may be due to her family connection with the more elaborate tomb to the south. Even if this reconstruction is correct, however, the circumstances are too unusual to support more general conclusions about a pattern of matrilineal burial. Perhaps significantly, 2097' is one of the few tombs that has two subterranean shafts. The deeper southern one was robbed, but the northern one was sealed and empty.

### Comparative Iconography

The tombs in the cluster share several iconographic features, some of which are quite rare outside it. These common features are perhaps due to the geographic and chronological proximity of the tombs, but they may also be a function of the tomb owners' common area of professional activity. It is also likely that they represent to some extent the tastes and preferences of the tomb owners.

One of the rarest and most enigmatic vignettes associated with swamp scenes is a "spanking" scene, of which only six are known, two of them in this cluster. In 2091 and 2097, a kneeling man is shown being beaten by a man who leans over him. The pair is observed by an overseer in a starched kilt, leaning on a staff, who is given the same problematic speech in both scenes: *dj mdw.f m nw sht*, "May his ten give with this a clap." *Sht* is in neither case determined with the clapnet, but a parallel scene from Saqqara with a slightly different text does use that determinative. This text, *wdj m sht.f m nw*, has been translated by H. Altenmüller as "Das Niederlegen beim ihn Einfangen im Grab,"<sup>40</sup> but the two parallels in this cluster make it unlikely that the association with the beating is accidental. I would prefer to translate "Put in his clap with this." (The spanker has a stick in his hand, as he may in the two examples in the cluster.) The references to a clapnet may be related to the frequent placement of these scenes near scenes of papyrus swamps, where bird-trapping also occurs. That punishment is intended is clear from the parallel scene in the tomb of Ptahhotep ii,<sup>41</sup> where it is the spanker who speaks, *ju c.(j) r.f mr.f*, "My arm is against him, so that he will hurt." Other

<sup>40</sup> "Arbeiten am Grab des Neferherenptah in Saqqara (1970–1975)," *MDAIK* 38 (1982), p. 8. Altenmüller describes the accompanying scene as "Rinderhirten beim Ringkampf." However, a photograph of this scene is published in J.Ph. Lauer, *Saqqara* (London, 1976), fig. 141, and Lauer correctly points out that the end of a stick is visible in the palm of the spanker's hand.

<sup>41</sup> R.F.E. Paget and A.A. Pirie, *The Tomb of Ptah-hotep* (London, 1898), pl. 31.

examples of the scene occur, in the chapel of Hetep-her-akhti<sup>42</sup> and, most peculiarly, in a model in the Oriental Institute<sup>43</sup> usually identified as children playing leapfrog.

Another unusual scene in 2091 seems to depict the making of rope.<sup>44</sup> It is directly above a scene of men tying together papyrus reed boats, suggesting that the rope was to be used in such construction. The scene was badly broken when the wall was drawn (and is now entirely gone), but the technique depicted was apparently that in which one man sits and feeds fibers into the rope while a standing man swings the weighted end of the rope to twist it. The same technique is represented in 2092+2093, in a very different context; in the scene below, and perhaps the one above, animals are driven over grain to thresh it. The purpose of the resulting rope may thus be different in this scene.

Many common scenes occur in more than one of the mastabas. Butchering scenes occur in five chapels, invariably in the lowest register, either with offering bearers above (2086, 2088 and 2098) or with a depiction of the offering ritual (2092+2093, 2240). The lack of such scenes in 2091 is surprising, given the quantities of live animals shown in the chapel. g 2091 has by far the greatest number and variety of domestic animals being led in for presentation, a scene that also occurs in 2086, 2087, 2092+2093,<sup>45</sup> 2097, 2098, and 2240. Birds are included in such offerings only in 2091 (cranes, along with cattle) and in 2097 (cranes and geese being driven, an ostrich in the desert, and killed geese with flowers). Scenes of animal husbandry include milking cows (2091), animals nursing calves (both a cow and a gazelle in 2091, a cow in 2092+2093), the birth of calves (2240), the force feeding of calves (2097 and 2240), and cattle crossing a canal (2092+2093 and 2097).

Desert hunting scenes are shown only in 2097, fowling scenes in 2092+2093, and fishing scenes in 2091 and 2097. There are no surviving scenes of bird trapping or poultry yards in the cluster, nor are there scenes of workshops, cooking, or other industrial activity.

Agricultural scenes relating to grain production are shown in most of the larger chapels, although different stages of the process are depicted in each chapel and no chapel contains the entire sequence: plowing (2091 and 2097); reaping (2092+2093, 2097, and 2240); threshing (2092+2093 and 2097); and winnowing (2240). The plucking of flax is shown only in 2091, and viticulture is shown only in 2092+2093.

One common scene with some interesting implications in this cluster is the "fishing and fowling in the marshes" scene. These scenes normally occur in symmetrical pairs on the facade or on walls near

<sup>42</sup> W. Wreszinski, *Atlas zur altägyptischen Kulturgeschichte* i (Leipzig, 1936), pl. 105. The caption here reads *hbj*, probably the speech of the victim, to be translated simply "ouch!" (See *Wb.* 2, p. 471.7).

<sup>43</sup> OIM 10639. The model was acquired in Cairo in 1920, along with the models of Nikau-Inpu (to which it may belong); the dealer gave its probable origin as Giza. The figures are quite similar to many of the models from the serdabs of 2088. It is tempting to associate them with this cluster; however, Nikau-Inpu did not hold any *hntj-š* titles. I am grateful to Dr. Emily Teeter for tracking down the accession records for me, and to Dr. Karen Wilson for allowing me to examine the piece.

<sup>44</sup> For discussion of the process of rope making, see E. Teeter, "Techniques and Terminology of Rope-Making in Ancient Egypt," *JEA* 73 (1987), pp. 71–77.

<sup>45</sup> A fragment of this scene occurs on the block noted in 1991, which could not be drawn. This block is more fully described in Part ii.

the entrance to tombs.<sup>46</sup> In this cemetery, such scenes appear to occur in isolation. In 2091, the existence of a fowling scene may be inferred from the remains there of a large-scale reed boat in a papyrus marsh to the right of the northern entrance to the tomb. Since there is no *Wasserberg* (the bending of the water and its fish up into the papyrus plants that characterizes the fish spearing scene), this scene probably depicts fowling. No fish-spearing scene survives to balance it, but one might perhaps be restored on the north end wall of the corridor. This end wall, which now has only traces of plaster, was probably originally decorated with the spanking scene and various other marsh scenes, which are now preserved only in a drawing. The parallel to this spanking scene in 2097 is accompanied by a fish-spearing scene. It is thus likely that the blocked entrance at the southeastern corner of the tomb was decorated with the counterpart of the scene at the northern entrance.

The two remaining scenes also appear to be isolated, in tombs 2092+2093 and 2097. The first is a fowling scene that was probably initially placed next to the Phase i doorway at the southern end of the corridor, between 2092 and 2093. When that doorway was blocked in Phase ii, the scene was left in an anomalous position, at the far end of the corridor, deep within the mastaba. The fish spearing scene in 2097 is placed, like the 2092+2093 scene, at the farthest point from the entrance to the chapel, the west end of its north wall. In this case, however, there is no earlier entrance to justify this unusual placement. One hypothesis that might explain the presence of this scene is to see it as a counterpart to the fowling scene in 2092+2093. Together these scenes would bridge the entire cluster, connecting the two tombs, just as the two scenes restored in 2091 face each other across the length of the tomb.

There are several other connections between 2092+2093 and 2097, apart from their physical proximity, their shared courtyard, and the similarity of the shape of their chapels noted above. The fact that they shared an entrance court suggests that they were built by close relatives, probably father and son, a hypothesis that would also explain why the owner of 2097, a man who was merely an ordinary *hntj-š*, had such an impressive (though small) tomb. The connection would also suggest an explanation for the peculiar circumstance that on both segments of south wall in 2097, the offering bearers are heading east, away from the false doors and away from the seated figures of the tomb owner above them. This may be because they are seen as proceeding out, toward 2092+2093, the same sort of anomalous positioning seen in the doorjamb and wall relief of Pehen-Ptah in the chapel of his father Ka-khent (2088).

Interestingly, the plan of the complex closely parallels that of the contemporary vizier Akhethotep and his son Ptahhotep ii at Saqqara. Both of these complexes had a central court, the father's tomb on the main axis, and the son's at a right angle to it. The similarity is emphasized by several rare motifs that occur in the chapel decoration of both Ptahhotep ii and Nimaatre. These include scenes of a lion attacking a cow, otherwise unparalleled scenes of lions copulating, and the scenes of a public spanking discussed above. These

tombs were clearly contemporary, and their relationships with the larger tombs adjacent to them were probably equally congruent.

Offering bearers with food offerings on footed trays and in their hands occur in all fully decorated tombs. (No men carrying trays are preserved in 2240, but these usually occur on higher registers than are preserved). Offering bearers carry flowers only in 2097. In some chapels, attendants also bring non-food items, such as boxes, sandals, baskets, and so forth (2091, 2097, and 2240); they are shown with scribal equipment in 2091, 2092+2093, and 2097. Offering lists are preserved only in three tombs, 2091, 2097, and 2098, however they also tend to occur on the upper parts of walls, which are lost in many cases.

The standard scene in which the tomb owner is presented with a lotus is preserved on the south chapel walls of 2086 and 2091. In both cases, the tomb owner faces west, the man presenting the lotus is not identified, and there are seated musicians and standing dancers and clappers in the registers below. In 2091, the tomb owner is seated in an armchair and carrying a brachiomorphic scepter; this area is lost in 2086. A similar scene occurs in 2097, where the lotus presentation is replaced by a game of *senet* and the offering bearers in the upper registers are replaced by seated scribes and a bed-making scene. This scene shares with 2091 the depiction of a hanging tapestry (probably originally painted with geometric designs) behind the chair and the brachiomorphic staff. g 2240 also had a scene of this type, but the area of the lotus presentation/*senet* game has not been preserved. All these tombs, where the relevant area is preserved, depict the tomb owner in an armchair, listening to musicians.

Another common characteristic of these tombs is the presence of the tomb owner's children represented standing on a floating baseline in the space between the tomb owner's kilt and his staff, which the child usually grasps. Such scenes occur most frequently on pillars and jambs. The tomb owner's son or other male dependents are represented in this position in 2091, 2098 and 2240; in 2086, a daughter is shown in this role as well as a son. A floating baseline was also used on the north face of the pillar of 2091, to support a daughter standing with her mother. Another girl, shown on a wall fragment from 2093, stands on the same baseline as her father between his legs and his staff, but she does not grasp the staff. On the east wall of 2097 and on an outer doorjamb of 2086, a child, probably a son, is shown on the same baseline as the tomb owner, grasping the staff.

Still other scenes occur just once in the cluster. g 2097 is especially rich in scenes not attested in the other tombs. These include the bed-making scene, the *senet* game, the seated scribes, and, most notably, a scene of desert wildlife with an unparalleled variety of copulating animals. g 2098 has two types of scenes not paralleled in the rest of the cluster, a procession in a carrying chair and the presentation of produce by the tomb owner's personified estates. That these are among the latest tombs in the cluster may explain these unique features; perhaps while they were able to copy features from neighboring tombs, there were no later tombs built in the area which might have copied their innovations. Alternatively, the distribution of unique features may simply be an artifact of personal taste and uneven preservation.

<sup>46</sup> Harpur, *Decoration in Egyptian Tombs*, p. 52.

Another distinction between the tomb owners as they were depicted in their chapel decoration is the clothes they wore. The triangular kilt is worn by every tomb owner, almost invariably on doorjambs, but sometimes in scenes on walls as well. Most tomb owners are shown with both long and short hair; the exceptions are the owners of 2086 and 2087, whose heads are nowhere preserved. Long hair is invariably shown in scenes where the tomb owner is seated at an offering table and on all but two doorjambs. The exceptions are the jamb of the outer doorway 2088 and possibly also the unfinished jamb decoration 2231. The 2088 jamb is also anomalous in depicting the tomb owner's son entering the chapel, rather than the tomb owner leaving it; this may correlate with the shorter hair he wears, though he is shown with a long wig elsewhere in the tomb. Short hair occurs more often on columns, and invariably when the tomb owner is seated in an armchair listening to music (2091, 2097, 2240) or a carrying chair (2098), circumstances that probably were less formal. The hair of the tomb owner's wife is always shown long in this cluster; that of daughters and other women is usually also shown long, unless they are performing as dancers or musicians, or when they are very young girls, in which cases they may wear a long pigtail (2088, 2092+2093).

The leopard-skin of a *stm* priest is worn by the tomb owner in 2086, 2092+2093, 2097, 2098, and 2240; the equally high-ranking owners of 2088 and 2091 do not wear it. The sash of the lector priest is worn only by the owner of 2098 (who is shown wearing it three times). Kapi, the owner of 2091, is the only person in the cluster ever depicted wearing sandals; he wears them in all three preserved scenes inside his chapel where he is standing. He is, however, barefoot on

his doorjambs. No clear pattern of titles could be found to explain any of these distinctions in clothing.

The most common posture of the tomb owner is standing with a staff held lightly in the far (forward) hand and a handkerchief, *hrp* scepter, or nothing at all in the near (back) hand. Two tomb owners hold their staffs even when they are seated: Za-ib, on both jambs of his false door (2092+2093) and Nefer-khuwi, in a scene where he is seated under a canopy (2098). Only Kapi, the owner of 2091, is shown leaning on his staff, with the far hand over the top while the near hand braces it. It is unclear whether this posture is connected with the sandals he wears in the same depictions. Empty-handed tomb owners seem to occur only on pillars: on at least one of the pillars in 2088, on two of the four faces of the pillar in 2092+2093, and on all three faces of the pillar in 2098.

Not only are there different combinations of motifs, postures, and accoutrements in each tomb chapel, but the individual scenes are never exactly the same. Even in the most conventional scene, the tomb owner standing with his staff wearing a long wig and a triangular starched kilt, there are variations in other elements: the presence or absence of children, the angle of the staff, the presence or lack of a collar, and the item held in the other hand, as well as the identifying facial features and texts. Other conventional scenes, for example, butchering scenes, musicians and dancers, and processions of offering bearers, initially appear similar, but always differ extensively in detail. Whether these differences in composition and detail were the strivings toward individual expression of the craftsmen who decorated the tomb, or whether they represented the taste and preferences of the individual tomb owners, is impossible to determine.

## Chapter 4: PATTERNS OF TOMB BUILDING

Many Egyptologists believe that the royal cemeteries of the Old Kingdom reflect the structure of Egyptian society during that period. However, neither the overall spatial organization of these cemeteries nor the interrelationships of the individual tombs has yet been fully described. This is partly due to the difficulty of establishing the date of most individual tombs. Unless all the tombs in a cemetery can be dated, it is impossible to determine the shape of the cemetery at any given time during its development. Even when tombs are dated, the dates are often based on their locations. In these cases, comparing the dates of tombs with their locations merely reinforces the untested assumptions about cemetery organization and growth that were used to arrive at the dates.<sup>1</sup> Another impediment to spatial analysis is that most publications have studied individual tombs in isolation, obscuring their relationships to other tombs.<sup>2</sup> As a result, it is unclear which aspects of social organization affected the arrangement and other characteristics of tombs, and by what principles cemeteries were governed.

Some initial work has been done on this problem. G.A. Reisner<sup>3</sup> proposed that the core mastabas at Giza were clustered in family groups. Reisner's identification of tomb owners and their family relationships were often based on tomb placement, however, so that arguments tend to be circular. W.S. Smith also argued for genealogical placement, but admitted the role of profession in tomb placement as well.<sup>4</sup> W. Helck, on the other hand, argued<sup>5</sup> that the organization was based on subdivisions within the building trade, whose members' professional connections allowed them to build impressive tombs near the pyramids where they worked. Some tomb owners' titles must be stretched in unlikely ways to connect their holders with pyramid building, however. D.B. O'Connor<sup>6</sup> has shown a clear division between royal family members and non-royal officials in the

eastern cemetery. The distribution in the west is less clear, and even in the east, finer distinctions are difficult to find. My own work on the organization of royal cemeteries of the Fifth and Sixth Dynasties<sup>7</sup> has dealt only with the changes in the nature of their occupants over time. None of these studies deals with later construction in older royal cemeteries.

The cluster of mastabas of palace attendants studied here is an excellent laboratory for studying the relationships between tombs and their owners, because the tombs can be assigned relative dates with such precision and because their owners all have titles in the same hierarchy. A comparison of the characteristics of the tombs with their owner's titles and the periods in which they were built suggests how these factors influenced the placement of tombs and the allocation of resources to different parts of a burial.

The most basic constraints and controls that affected the builders of tombs, and hence the organization and development of Egyptian cemeteries, are unknown. No textual evidence records the degree to which central control was exercised over the right to construct new tombs or over their placement, size, and orientation. How was space in these cemeteries allocated? What was the comparative importance of factors such as wealth, rank at court, professional specialty, and family heritage in determining the site and form of a tomb? To what extent could all these factors be outweighed by the personal preferences and allegiances of the tomb owner? Was access to earlier structures preserved by some sort of legal restriction, by conventional morality, or only by sentimental or genealogical ties between the owners of older tombs on the site and new tomb builders? What were the social and legal restrictions against reusing, altering, or even robbing these older tombs during the Old Kingdom? Such questions can only be approached through examination of the cemeteries themselves.

The answers to such questions that can be drawn from circumstances in this cluster are limited and tentative, but from them it is possible to suggest hypotheses that might explain the development observed. These hypotheses must be tested against evidence from many cemeteries and parts of cemeteries to arrive at a general picture of how cemeteries developed and functioned. Such studies may allow a better understanding of the factors that influenced tomb builders' choices.

### The Distribution of Resources in the Cluster

The titles of the tomb owner, reflecting his rank and status, are only one factor that might have affected the form of his tomb. Other considerations are his family connections and the economic resources available to him in the construction of the tomb, either through his

<sup>1</sup> In *GNi*, Reisner lists textual criteria as the main basis for his datings of core mastabas (p. 31), but he seems in fact to have based his datings on their relationship to other mastabas in the same cemeteries and the Khufu pyramid (pp. 78–84). He dates smaller tombs within the cemetery on their relationships to the core mastabas (p. 14).

<sup>2</sup> This is true of most epigraphic tomb publications. Even the excavation reports, such as H. Junker's and Selim Hassan's Giza series, tend to be divided into reports on individual mastabas.

<sup>3</sup> *GNi*, pp. 28–29.

<sup>4</sup> W.S. Smith in his appendix to G.A. Reisner, *Development of the Egyptian Tomb down to the Accession of Cheops* (Cambridge, MA, 1936), p. 393.

<sup>5</sup> "Zur Entstehung des Westfriedhofs an der Cheops-Pyramide," *ZÄS* 81 (1956), pp. 62–65.

<sup>6</sup> "Political Systems and Archaeological Data in Egypt, 2600–1780 b.c.," *World Archaeology* 6 (1974), pp. 20–22.

<sup>7</sup> Roth, "Social Change in the Fourth Dynasty," and idem, "The Organization of Royal Cemeteries at Saqqara in the Old Kingdom," *JARCE* 25 (1988), pp. 201–14.

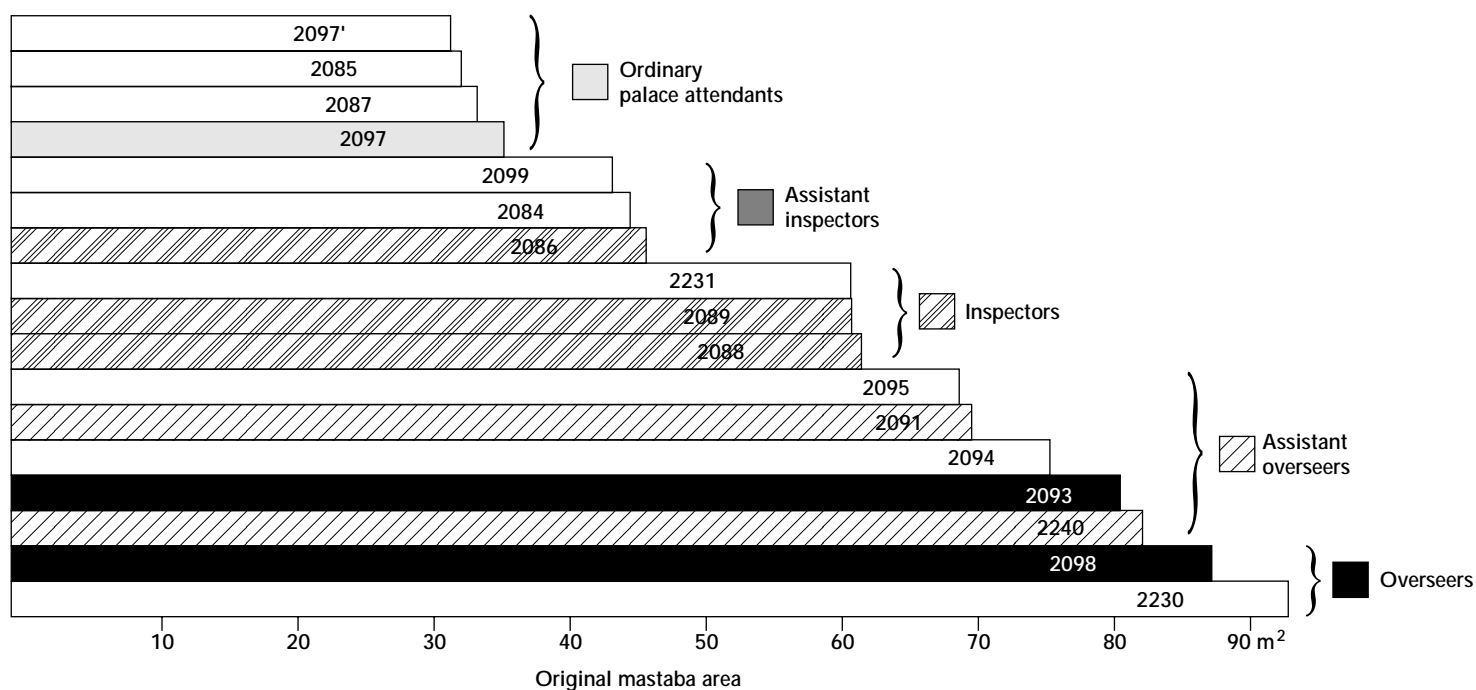


Fig. 12. A histogram of original mastaba areas. The smaller tombs cluster into three groups, tentatively correlated with the three lowest ranks of the palace attendant hierarchy; the areas of the upper two ranks are less uniform. The shading of the bars represents the titles actually attested in the tombs.

own wealth or the generosity of the king.<sup>8</sup> Current fashions or long-term trends might also have affected certain characteristics of a tomb, which would thus correlate with its date; professional connections and interests might determine the content of the decoration; and idiosyncratic personal tastes, independent of fashion, surely also played a role where other agencies left the tomb builder (or the artisan actually doing the work) a choice. All these factors might have affected independently eleven different areas of potential investment during tomb construction and the use-life of the building.

- (1) The tomb's position in the cemetery
- (2) The total area occupied by the tomb and its approach
- (3) The volume of bedrock excavated to create the subterranean part of the burial shaft and the burial chamber
- (4) The quality of the limestone blocks that form the "skin" of the mastaba and their degree of finish
- (5) The imported materials (granite, other non-local stone) used in construction
- (6) The amount of decoration, and its technique, contents, and quality
- (7) The number, size and contents of serdabs
- (8) The contents of the burial chamber and the technique of mummification used
- (9) The funeral ceremony, mourners, and banquet
- (10) The endowment land set aside to support the cult functionaries and the carrying out of mortuary rituals
- (11) Secondary tombs or monuments, such as the shrines attested at Abydos in later periods

Obviously, the last three provisions are difficult to detect in the archaeological record, especially one that has been largely reduced to

architecture and iconography. No tomb owner in this cluster is attested on monuments elsewhere in Egypt. There are no endowment texts to suggest the organization of cult functionaries. It might be imagined, however, that their number and scale of remuneration reflected the size of the tomb owner's family and his desire to bequeath them his resources, since cult endowments would have been a practical way to confer an inheritance. A large number of children might be supposed to require a proportionately greater allocation of resources to this area.

Even the expenditures that left physical traces may be incompletely preserved. The use of exotic building stone is unattested for these tombs, although, as has been noted above, granite and other exotic stone may have originally been used in the cluster, and later robbed. The preserved contents of the burial chambers and serdabs are also incomplete. The relief decoration is also only partly preserved, and any painted decoration has been completely lost.

The factors to be analyzed thus must be limited to the mastaba's area, the mastaba's position, the shape and size of the chapel, the casing, the decoration, including the type and quantity of texts, the volume of the substructure, and the contents of serdabs and the burial chamber. It must be remembered that there were other areas where economic and social resources may have been expended, and the features that can be measured can give only an incomplete picture.

*Mastaba Area.* One point at which centralized control might be expected is in the area of the mastaba, since land in a cemetery surrounding a royal pyramid was presumably at a premium and under rationing of some kind. The architectural evidence in this cluster does in fact support a degree of control based on the tomb owner's rank.

<sup>8</sup> Royal gifts were apparently unpredictable, judging from the texts that record their receipt. A selection of texts recording such gifts are published in *Urk* 1, pp. 18–21; 38–40.3; 40.4–45.9; 98–110; 146.10–15; and 232–4. They ranged from elements such as false doors (often of special imported materials beyond the tomb owner's resources) to endowment of estates (presumably royal gifts, since royal estates are shown bringing offerings to the tomb owner in private tombs) to construction of an entire tomb.

The areas of all the major mastabas that are not extensions of other tombs have been plotted as a histogram in fig. 12. (The original sizes were used, because a different scale may have applied to additions.) The shading of the bars represents the highest attested title where it is known. The tombs at the lower end of the scale fall neatly into three groups; those at the upper end can be divided into two more groups, although less neatly, perhaps because more options in the distribution of wealth and royal largess were open to men of higher rank. (The numerous other titles borne by these higher ranking officials may also have had an effect.)

These five groups seem likely to correlate with the five levels of the palace attendant hierarchy. Of the titles actually attested, no tomb-owner has a larger tomb than his titles would suggest. g 2086 and 2093 are smaller tombs than would be expected from their owners' titles, but both tombs were subsequently enlarged, perhaps as a result of the owners' promotions.<sup>9</sup> In addition, an uninscribed mastaba, 2099, was extended to the south by a man whose serdab statues indicate that he was an assistant inspector of palace attendants, the same rank that would be predicted by the size of the original mastaba. Perhaps the owner of the serdab built in this area because he had inherited his title from the original owner of 2099. Not shown on the histogram is a mastaba that clearly contradicts the hypothetical correlation of rank and tomb area, 2092a. However, this tomb is an intrusive burial with a usurped false door that may have been moved from a larger structure. As a Phase iv tomb, moreover, it was later than most of the other mastabas, and the amount of land allowed for the various ranks may have decreased with time.

The ranges of mastaba area of the tombs of men whose titles are known allow the anonymous owners of mastabas that have no decoration to be tentatively assigned ranks within the *hntjw-š* hierarchy. These tombs and their areas are listed in brackets in fig. 13, after the tombs that can be assigned to the category on inscriptional evidence. Note that the original area of 2086 fits well into the range of areas for an *jmj-ht hntjw-š*, the rank below the rank he ultimately received. The mastaba of Kapi, 2091, fits the pattern less well. His original mastaba was above the average size for a *šbd hntjw-š pr-š*, and it was later expanded to an area larger than normal for a *jmj-r st hntjw-š*. Perhaps this extra area was the result of some of his other titles; he was, for example, the only person in the cluster to bear all three of the titles *w<sup>rb</sup> nswt*, *rh nswt*, and *hrj-ššt*, all of which allude to a connection with the king.

The area given for 2099 here reflects the area of the mastaba massif north of the spur wall that affected the support wall of 2098; the area south of that wall, and the corridor claimed by its enclosure is assigned to the builder of the serdab. Both tombs would thus fit in the category of *jmj-ht hntjw-š*: the original mastaba massif because of its area, and the addition with the serdab because of its statue's inscriptions. That the addition is too small for the rank its owner holds is probably related to the fact that it is an addition to an older

Tomb	Mastaba Area (square meters)	
<i>jmj-r hntjw-š pr-š</i>		
"overseer of palace retainers"		
2093	81.0	(later enlarged)
2098	87.5	
2092a	4.0	(intrusive tomb)
[2230	92.93]	
[2099	87.14]	
<i>jmj-r st hntjw-š pr-š</i>		
"assistant overseer of palace retainers"		
2091	70.2	(later enlarged to 97.3)
2240	82.4	
2088.1	49.69	(addition; with his father's, 111.64)
[2094	75.47]	
<i>šbd hntjw-š pr-š</i>		
"supervisor of palace retainers"		
2088	61.95	
2089	60.5	
2086	46.71	(later expanded to 64.1)
[2095	69.1]	
[2231	60.5]	
<i>jmj-ht hntjw-š pr-š</i>		
"assistant supervisor of palace retainers"		
2099S	25.3	(addition to 2099; total 69.3)
[2099	44.0]	(original mastaba north of rubble wall)
[2084	45.32]	
<i>hntj-š pr-š</i>		
"palace retainer"		
2097	36.29	
[2085	32.78]	
[2087	34.0]	
[2097	32.47]	

Fig. 13. Mastaba areas, as a function of the rank of the owner. The tombs given in brackets at the end of each rank category are assigned a rank based on the similarity of the area to that of tombs of men whose titles are attested.

mastaba, where a different scale apparently applied; for comparison, see the addition made by the original owner's son in 2088. Both the original builder of 2099 and the builder of the extension (Raramu) thus are likely to have had the same rank; this would be plausible if Raramu was the original owner's son and inherited his title.

In fig. 14, the tombs have been arranged in roughly chronological order, based on the chart of the cluster's development given in Chapter 2 (fig. 4). The curve in the upper part of the table shows the increasing popularity of this part of the cemetery with high officials in the hierarchy (or at least officials entitled to mastabas of greater area) during Phase i. This popularity declined precipitously in Phase ii, when the blocking of the path to g 2000 made the location less desirable; it is perhaps significant that the largest buildings during this period are extensions of earlier tombs, perhaps built by family members who were already committed to the location. Finally, at the end of Phase ii and the beginning of Phase iii, the area again became briefly popular with higher members of the hierarchy, perhaps when it became clear that the obstruction to the path would be removed.

The correlation between title and mastaba area outlined here agrees with Naguib Kanawati's conclusions and supports his assumption that the land for tombs within the cemetery was allocated by the

<sup>9</sup> This phenomenon can be seen in g 2184, where a tomb owner's additional titles occur in each of two enlargements of his tomb. (Roth in D'Auria et al, *Mummies and Magic*, pp. 86–87.) The same phenomenon may explain the additions to the tomb of Kapi, who holds two of the titles in the *hntj-š* hierarchy, presumably as the result of a promotion.

Tomb number	Mastaba (square meters)	Level of title	
2085	32.78	[•]	Phase i
2089	60.5	•••	
2088	61.95	•••	
2091	70.2	••••	
2086	46.71	•••	
2094	75.47	[••••]	
2230	92.93	[•••••]	
2093	81.0	•••••	
-----			
2231	60.5	[•••]	Phase ii
2095	69.13	[•••]	
2099 orig.	44.0	[••]	
2087	34	[•]	
2097'	32.47	[•]	
2097	36.29	•	
2098	87.5	•••••	
2240	82.4	•••••	
-----			
2099 serdab	25.3 added	••	Phase iii
2084	45.32	[••] or ••••?	
2088 son	49.69 added	••••	
-----			
2092a	4.0 intrusive	•••••	Phase iv
2092a	0.0 usurped	•••	
2097x	0.0 usurped	•••	

- = *hntj-š*
- = *jmj-ht hntjw-š*
- = *shd hntjw-š*
- = *jmj-r st hntjw-š*
- = *jmj-r hntjw-š*

Fig. 14. The development of the cluster showing the rank of the builders, ordered chronologically, according to the conclusions in Chapter 2. (The rank restored in brackets is that hypothesized for the owners of uninscribed tombs, based on the area of the mastaba.)

state.<sup>10</sup> However, the distinctions shown here are considerably finer than his, since all five levels of *hntjw-š* fall into his “middle” category. He claims that in this category, the average area of mastabas for the “middle” level of officials declines during this period from 251 to 30 square meters.<sup>11</sup> As fig. 14 shows, a decline can be seen in this cluster as well, from an average of 65.2 square meters in Phase i to 55.8 square meters in Phase ii, to 40 square meters in Phase iii, to 4 square meters in Phase iv. This trend, however, reflects not a decrease in the allocation of space in the cemetery to members of the *hntj-š* hierarchy (except possibly during Phase iv), but rather a decline in the cemetery’s popularity with the higher ranking officials in the hierarchy. The correlation of tomb areas with finer levels of rank rather than with date suggests that tomb area was not so entirely dependent upon a single factor.

**Mastaba Position.** The location of a tomb was clearly related to its owner’s title in this cluster, if only because membership in the hierarchy of palace attendants was apparently a prerequisite for burial there. As the cluster developed along the northern side of the path that led around mastaba g 2000, the earliest tombs showed a spatial patterning in which the highest ranking officials had mastabas closest to g 2000. This huge mastaba seems to have been the focus of several concentrations of tombs of *hntjw-š*, there is a second concentration

around its southern cult place.<sup>12</sup> After the shift in the orientation of the cluster to the north, however, this hierarchical pattern was not maintained. Apparently, proximity to mastaba g 2000 ceased to matter once the path to it was closed, and this suggests that the initial pattern was the result of a comparatively flexible convention.

As fig. 14 illustrated, the tombs of Phase i show a clear predominance of holders of the title *shd hntjw-š pr-š* among the earliest occupants of this cemetery. Most of the men with higher titles built their tombs near g 2000, at the western edge of the cemetery. g 2091 belonged to a *shd hntjw-š pr-š* who was later promoted to a *jmj-r st hntjw-š pr-š*. It was built just west of the tombs of the owner’s future subordinates, perhaps for the same reason that it was slightly larger. g 2093, built by the highest official in the hierarchy, a *jmj-r hntjw-š pr-š*, was located even further west. The westernmost tomb in the cluster, 2094, was smaller, and perhaps belonged to a lower ranking man; perhaps because it was west of the turnoff that led to the east face of g 2000. The greatest anomaly was the position of 2230, which by its size should have belonged to the highest level in the *hntj-š* hierarchy. Its position at the extreme east of the cluster is difficult to explain.

Aside from this problem, the cemetery was apparently organized in relationship to mastaba g 2000 rather than to the pyramid of Khufu. Since the owner of g 2000 is unknown, it is difficult to assess the meaning of this orientation. Since the tomb is of approximately the same dimensions and plan as g 7510, the tomb of Ankhaf, it is likely that its owner had a similar status, that is, he was also a son or brother of Khufu. Reisner notes that its burial chamber contained a “large male skeleton,” and quotes Dr. Derry’s opinion that “the skull is that of a very old man and its dimensions indicate a person of unusual mental capacity.”<sup>13</sup> Whatever the reason for the status accorded to mastaba g 2000, it demonstrates that the pyramid of Khufu was not the sole focus of the cemetery during the later phases of its development. The spatial metaphor of the pyramid and mastabas as analogues to the king and his surrounding courtiers no longer held in the late Fifth Dynasty at Giza, if it ever existed at all.<sup>14</sup> Instead, the organization seems to have been in part determined by more local considerations within the cemetery.

In Phase ii, tomb placement was apparently less restricted. The tomb of an ordinary *hntj-š pr-š*, 2097, was built in violation of the earlier pattern at the extreme west of the cemetery. This disruption may have been the result of special circumstances, such as a relationship between the owners of 2092+2093 and 2097. Alternatively, the placement of this tomb may simply have been the result of the new northern orientation of the tombs of this phase: the position of a tomb relative to g 2000 may have been less important when that mastaba was inaccessible. This supposition would be supported by the placement of 2240, belonging to a man of the second highest rank in the hierarchy, at the eastern end of the cluster. The fact that

<sup>10</sup> Naguib Kanawati, *The Egyptian Administration in the Old Kingdom*, p. 38.  
<sup>11</sup> *Ibid.*, pp. 23–27.

<sup>12</sup> g 2001, 2002, 2004, 2009, 2011, 2035, 2042, and 2043 all contain *hntj-š* titles, all but two of them at the two lowest levels.  
<sup>13</sup> *GNi*, p. 416. One could speculate that the longevity and “unusual mental capacity” of g 2000’s owner might later have inspired burials nearby.  
<sup>14</sup> See Roth, “The Organization of Royal Cemeteries,” pp. 201–14.

the owner held a priesthood of Khufu may also have affected the placement of his tomb.

The return to a southern orientation did not lead to a noticeable resumption of the earlier positioning of tombs. The only constructions built in this period both belong to *jmjw-r st hntjw-š pr-ḳ*. The extension to 2088, built by the owner's son, was of predetermined location; but 2084, a tomb that may be the source of a lintel bearing the same title, is even further from the western area that had been so prestigious in Phase i.

The usurpations and incursions of Phase iv seem, however, to show some evidence of the earlier organization. All three of the named individuals dating to this phase who have titles in the *hntj-š pr-ḳ* hierarchy built their tombs in the western part of the complex. The occupant of the serdab of 2097, Mernetjer-Izezi, who left his titular and figure on that tomb's palace facade decoration, was a *šḥd hntjw-š pr-ḳ*, who actually held a higher title in the hierarchy than the man whose tomb he usurped. g 2092a, a subsidiary mastaba in the court just to the south of 2097, was decorated with a false door dedicated to a man who claims the titles *jmj-r*, *jmj-r st*, and *šḥd hntjw-š pr-ḳ*. The southern half of the false door was later usurped by a man who inserted the title *šḥd hntjw-š pr-ḳ* along with his name, so that he, too, presumably held this rank.

The titles within the *hntj-š* hierarchy may not have been the only factor in tomb placement. The two earliest officials to build to the west, the owners of 2091 and 2093, although of different ranks, not only shared a similar tomb plan, but had wives who served as priestesses of Neith. Another pair of tombs that had a similar plan were 2098 and 2099 (in its ultimate form), the western two of the four angled tombs on the north. Their owners also shared the title *wḳb-nswt*, although they were separated by two steps in the *hntj-š* hierarchy. The owners of 2091 and 2240 were also *wḳbw-nswt*, however, and their tombs are differently located and differently shaped. The tombs with references to Khufu in names and titles (2240, 2099, and 2098) are all in the northern part of the cluster. A rather unusual title, *jmj-r šwj pr-ḳ*, "overseer of the two *š*'s of the palace," which may be related to the title *hntj-š*, is attested in two tombs, 2098 and 2240. These tombs were different in plan and location, but similar in date. It is difficult to determine to what extent these factors were important, but when more areas of cemeteries are examined at this level of detail, patterns of significance should emerge that will help to determine whether such correlations are coincidental.

**Chapel Shape.** The place of an individual in the *hntj-š* hierarchy may also have been a determinant of chapel type: "L-shaped" chapels tend to belong to *šḥdw hntjw-š pr-ḳ*, while the "recessed" type with a roof supported by columns tended to belong to their superiors. This distribution may, however, be an artifact of the earlier predominance of the *šḥdw hntjw-š pr-ḳ*, when the "L-shaped" form was more popular. Figure 15 groups the chapel plans according to the titles suggested by the five ranges of mastaba area distinguished in the preceding section. The pattern seems to be that the smallest group of tombs has only an exterior false door, while the second group has a covered offering place, and the third group an L-shaped chapel. Tombs of the fourth group tend to have columns supporting the roof of an open

Fig. 15. Chapel plans arranged into groups corresponding to the original areas of their mastabas, which in turn correlate with the hypothetical titles of the owners at the time of construction. Within each size category, the plans are ordered from left to right in ascending mastaba area.

area, with the number of columns increasing from one to two in the larger tombs, and the interior space increasing in complexity. The largest tombs have enclosed chapels supported by columns. (When 2093 and 2091 were expanded in area, their chapels were enclosed.)

There are two major exceptions, which are interesting because the same two tombs are also exceptional in their decoration. Both types of anomaly may be due to variations in wealth. g 2230, the largest mastaba in the cluster, has an L-shaped chapel (although with the depth of a recessed chapel), but little carved decoration (one door-jamb bears an unfinished figure). Its owner's titles are thus unknown, although the size of the tomb would indicate an overseer of palace attendants. A possible explanation for the anomaly is that the owner was promoted beyond his means and spent most of the resources available to him for tomb building constructing a mastaba that filled the area to which he was entitled. The roughly finished w-masonry used in the mastaba facing may also represent a measure taken in order to economize.

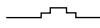
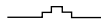
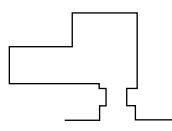
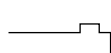



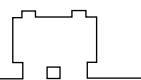
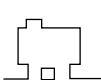
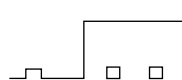
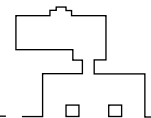
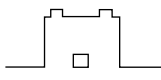
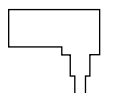
In contrast, 2097 belonged to a man who was only an ordinary palace attendant, or possibly a scribe of palace attendants (depending on how his title is read). Although the area of the tomb is commensurate with his title, its chapel was one of the largest and its decoration is the finest in the cluster. The tomb abuts 2096, which is itself an extension of mastaba 2092+2093, the tomb of an overseer of palace attendants. g 2097's chapel apparently copied the peculiar shape that the chapel of 2092+2093 had acquired during its evolution: a recessed western wall with panelled facade, and a false door in the short corridor to the south, in front of the principal tomb shaft (the door is actually missing in 2097, but can be restored with some certainty). The unusual placement of the false door in 2092+2093 dates to an early phase of the mastaba's construction, and was probably intended to make it more accessible to passersby. Although the position became awkward and obscure as a result of later construction, the owner of 2097 apparently placed his false door in an analogous, equally awkward position. The two tombs are also associated by their decoration, as was described in Chapter 3, and for this and other reasons it is likely that the owners were father and son.

The shape of the chapel may thus have been determined by wealth rather than rank. Its apparent correlation with rank in other tombs may be due to the fact that wealth and rank often go hand in hand.

**Casing.** In his discussions of mastaba casings, Reisner suggested that stepped casing (z-masonry) might have been more economical than battered (u-masonry).<sup>15</sup> In fact, however, the variations in casing finish seem to be more a factor of date at this period than of wealth. With two exceptions, all the mastabas built after the middle of Phase i are of battered masonry, while the earlier mastabas largely have stepped facades.

<sup>15</sup> *GNi*, p. 178.



30–40 m <sup>2</sup>			
	2097'	2085	2097
40–50 m <sup>2</sup>			
	2084	2086	
60–65 m <sup>2</sup>			
	2089	2088	
65–85 m <sup>2</sup>			
	2091	2094	2093
			
			2240
85+ m <sup>2</sup>			
	2098	2230	

The first exception was the large undecorated mastaba 2230, built during Phase i, which was cased with Reisner's "w-masonry," large, roughly finished blocks. While these blocks might be seen as more in scale with such a large mastaba, other factors, such as the small undecorated chapel and the disproportionately small burial chamber, indicate that they are more probably an effort to economize in the construction of the largest original mastaba in the cluster, as suggested above.

The other mastaba that departed from the battered u-masonry that was standard after the first part of Phase i was 2084, built during Phase iii. This mastaba abuts earlier construction on three sides, so that only its southern side was cased as an exterior facade. Inexplicably, this side was faced in stepped masonry. This cannot have been in order to match one of the structures to the north or south for a more monumental entrance, since both are battered. One possible explanation might be that the northern end of 2084 abutted and buried the stepped southern face of 2085, a much earlier mastaba. The stepped masonry of the new mastaba might have been intended to preserve the impression of the earlier tomb. However, since the northern chapel wall blocked the access to the false door of 2085 from the southern path, this explanation is unlikely. It may simply have been an idiosyncrasy of the owner's taste, or conceivably the remnant of an early Phase i structure, now lost.

Oddly, the stepped facades seem to have been easier to modify than the later battered casings. The latter apparently had to be entirely rebuilt when a wall was extended or a doorway blocked, whereas an extension could simply be abutted against the stepped casing. Whether the difficulty of modifying walls with battered casing was important enough to make its use an example of conspicuous consumption and explain its increasing popularity is unclear, but it does not seem likely. A change in fashion, or even theology,<sup>16</sup> seems a more probable explanation.

*Decoration.* As discussed in the previous chapter, the tombs of the cluster reveal certain similarities and interrelationships in decoration that may reflect the chronological and genealogical relationships between the tomb owners. It is difficult to tell to what extent these mastabas were decorated, since some may have had decorated elements

<sup>16</sup> The change from stepped to smooth-sided pyramids might be seen as a model for the latter type of explanation.

that have since been removed, or painted decoration that has completely faded away. Fig. 16 shows the linear extent of the relief

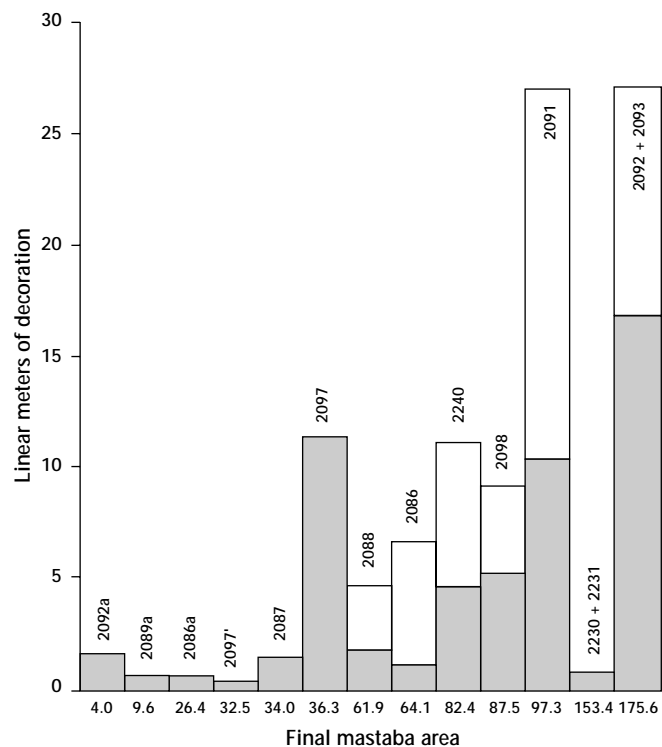


Fig. 16. The linear extent of the decoration, based on the surviving remains. The light area is the plaster-cut decoration, while the dark area is cut directly into the stone. The bars are arranged in increasing order of the mastaba's final area, since decoration was one of the last steps in tomb construction. (Architraves have been omitted, since they are not comparable with wall decoration, and have been lost in most cases.)

decoration of individual tombs in the cluster, insofar as it can be deduced from the surviving remains. No clear pattern emerges, beyond the general tendency for larger tombs to have more extensive decoration.

Another factor affecting the extent of decoration is the height of its baseline above the floor. A lower baseline would have allowed a greater quantity of decorated surface in rooms of equal perimeter, unless the chapel had a correspondingly lower ceiling. The comparative heights of baselines are given in Chapter 1. Although the lowest measurement (.21 m above the floor) belongs to a holder of the highest rank in the *hntj-š* hierarchy, the three highest measurements (.9–1.0 m) are also found in tombs belonging to members of the upper two ranks. The next highest, however, belongs to the lowest ranking member of the hierarchy; and thereafter the rank of the tomb owner increases as the baseline is lowered. Perhaps the high baselines were required for the traditional black dado with red and yellow bands, which two of these three tombs with high-baseline clearly had. If the dado was not desired, the baseline was perhaps lowered to accommodate as much decoration as the tomb owner could afford. However, this sample is extremely limited. It would be useful to check the pattern against other Old Kingdom tomb chapels; however, the height of the dado is rarely recorded in tomb publications.

One interesting parallel that is worthy of note is the pattern of decoration in the Saqqara tomb of Ptahhotep ii and his father Akhethotep, which has already been cited (Chapter 3) as a parallel to

the relationship between the owners of 2097 and 2092+2093. Although Ptahhotep ii never reached his father's high level in the bureaucracy,<sup>17</sup> his smaller tomb chapel was finely decorated, both more creatively and more thoroughly than his father's. Akhethotep's chapel had a 1.53 m high dado around the base of its walls, while Ptahhotep's decoration begins .60 m lower, at .93 m above the floor, as if to squeeze more scenes in. Presumably Ptahhotep was able to make use of his father's wealth, and only had a limited space in which to do it. The exceptional quantity and quality of decoration in Nimaatre's tomb may have had an analogous explanation. A similar difference exists in the base of decoration in the tombs of Za-ib and Nimaatre: the decoration on the east wall of Za-ib's chapel begins about 1.10 m above the floor line, while the decoration in Nimaatre's east wall begins .50 m lower, only .60 m above the floor. It can tentatively be concluded that his father's wealth did not affect the area of the mastaba but only its decoration. Inherited wealth could thus buy a large well-decorated chapel, but the total area the mastaba could occupy was limited by one's place in the bureaucracy. This assumption is also supported by the large but undecorated tomb 2230, which, it was argued above, was an example of the reverse situation: a tomb owner of high rank without wealth.

The distribution of the two techniques of carving used is problematic. As noted in Chapter 2, the decoration of western walls tends to be cut directly into the stone, while the northern, southern, and eastern walls tend to have decoration cut into a plaster coating. The dark area in fig. 16 represents stone-cut decoration, and the light area represents plaster decoration. In general, the more extensively decorated tombs tend to have more decoration cut into plaster, probably because the decoration of the less decorated chapels concentrates on the west wall and on architectural elements, such as lintels and columns, which were made of better stone for structural reasons.

The date of construction of a tomb seems to have had little effect on the quantity or concentration of decoration it contained. The intrusive tombs of Phase iv, when they are decorated at all, are in sunk relief rather than the raised relief that predominated in the earlier decoration, but this chronological shift is attested more clearly elsewhere.

*Texts.* Of the seven chapels with large areas of preserved decoration, those of both 2088 (belonging to a *šd hntjw-š*) and 2086 (also a *šd hntjw-š*) are notable for the rarity of captions and descriptive texts, especially over scenes of music and offering bearers. Even 2091, which belonged to *šd hntjw-š* later promoted to a *jmj-r st hntjw-š*, has very few such texts on the walls of its inner chapel (with the exception of several labels over large birds). On the other hand, the corridor of this tomb, which was added in a later expansion of the mastaba, quite frequently captions scenes and includes at least one example of the *Reden und Rufe* recording the conversations between people working in the fields. This increase in the frequency of texts may have been a function of the tomb owner's promotion to a higher

<sup>17</sup> The title "vizier" appears only on the sarcophagus and not in the chapel of Ptahhotep ii, and so may represent a posthumous promotion. Alternatively, the sarcophagus may belong to someone else, since the "good name" it bears is also absent from the chapel.

rank.<sup>18</sup> This corridor also represents the addition of a new type of scene to the tomb, the outdoor agricultural scene (as opposed to the mere bringing forward of offerings) and the marsh scene.

The other holder of the title *jmj-r st hntjw-š*, the owner of 2240, captioned his agricultural scenes with about the same frequency. Captions were given to the musical scenes in his tomb as well. Offering bearers and butchers are still not captioned in 2240, and no marsh scenes have been preserved. The same circumstance seems to hold in 2097, where the tomb owner has the lower title *hntjw-š pr-š*: marsh scenes and agricultural scenes are captioned, but the offering bearers are not. This unusually high level of captioning for an ordinary palace attendant may relate to the fact that Nimaatre is the only tomb owner in the cluster to hold a scribal title. It also may reflect his father's higher office. Nimaatre may have received a better education because of his family's status.

The two holders of the title *jmj-r hntjw-š*, the owners of 2092+2093 and 2098, show captions over butchers and offering bearers, as well as in agricultural scenes and marsh scenes. In the case of 2092+2093, much of the walls are lost, and it is difficult to guess what might be missing. In 2098, however, two further elements are added: a carrying chair scene with a long narrative text, and a procession of named estates. The addition of such features may be connected to the tomb owner's higher rank.

The offering list may also occur in a limited context. They are preserved only in 2091, 2097, and 2098. Such lists might also have occurred in 2240 and 2092+2093, where the upper parts of walls are entirely lacking. The presence of the offering list thus correlates well with the frequency of other texts in the tombs.

Again, it will be illuminating to check the patterns observed here against the tombs of the same officials in other parts of the cemetery. Limitations placed on the overall use of texts, or on the use of texts in certain environments, may be a result of the control of knowledge and information discussed by J. Baines.<sup>19</sup> These patterns may also have implications for the degree of literacy of tomb owners and the religious and social importance of the written word in Old Kingdom society. Such a comparison is, however, well beyond the scope of this book.

*Serdabs.* The apparent stratigraphic level of the remains of the contents of the serdabs of 2088 and 2240 demonstrate that many of them were plundered in antiquity. Only two serdabs were found intact. g 2099's serdab contained statues of an assistant inspector of palace attendants and his family. These four stone statues are of medium to good craftsmanship, although their inscriptions are quite crudely carved. They certainly seem more impressive than the four decayed and fragmentary painted wooden statues found in the serdab of g 2086, whose owner was a level higher in the hierarchy. Given the rarity of wood, however, they may have originally been more equivalent in value than is now apparent. The two serdabs of g 2088,

which belonged to a man a level higher still, clearly contained many fine statues and models, the remains of which were found nearby, contrasting with the comparatively meager extent of decoration of the chapel.

The variability in the contents of serdabs may be a factor of date, since the sizes of the serdabs seem to show a chronological patterning (see fig. 17). During the first phase of construction in the cluster, each serdab built seems to be larger than the one preceding. After the change in orientation, the size becomes quite consistent, with a floor area between 2.7 and 3.1 square meters. The only exceptions are the three serdabs added to previously existing tombs (2097.S2, 2097.S3, and 2099); the size of these serdabs was probably limited by earlier construction.

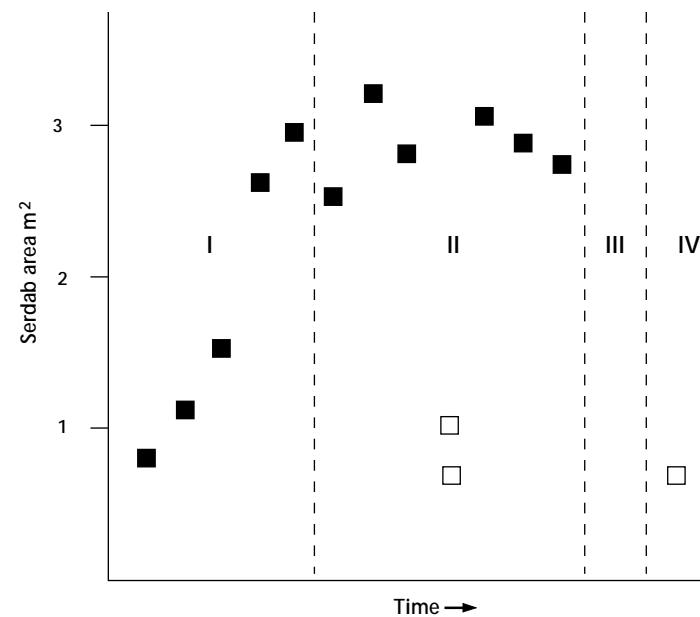


Fig. 17. The area of the serdabs, in chronological order. Numbers indicate the four phases of mastaba construction. The white squares represent serdabs inserted into limited existing spaces.

The sharp rise in the area of serdab chambers during Phase I may have been needed to accommodate the "servant" statues that became increasingly common at just this period.<sup>20</sup> These models usually showed men and women processing agricultural products or, more rarely, entertaining the tomb owner. A possible link between the people depicted and the occupants of the secondary shafts is discussed at the end of the next section.

*Subterranean volume.* The volume of the bedrock excavated under the mastaba for the principal shaft and burial chamber is one of the more quantifiable investments to be seen in these mastabas, and certainly the best preserved. This excavation was divided into two parts: the shaft itself, in which the greater volume represents greater depth and security, and the burial chamber, the volume of which must have to some extent been a function of the quantity of grave

<sup>18</sup> The title *jmj-r st hntjw-š* on the southern false door is very lightly incised, and may be a later addition. For another example of the relationship of promotions to expansions of a tomb, see D'Auria et al., *Mummies and Magic*, p. 86.

<sup>19</sup> John Baines, "Restricted knowledge, hierarchy, and decorum: Modern perceptions and ancient institutions," *JARCE* 27 (1990), pp. 1–23.

<sup>20</sup> E. Brovarski dates the beginning of these models to "about the middle of Dynasty 5," and gives several examples of tombs of that date with servant statues (in D'Auria et al., *Mummies and Magic*, p. 88). The enlargement of serdabs in the tombs of this cluster dated to the reign of Niuserre suggests a more precise date for the introduction of these supplementary statues.

goods. One would assume that greater volume of burial equipment would require greater security but this does not seem to have been the case. In fig. 18, the area of the mastaba<sup>21</sup> is compared both with the volume of the entire underground part of the major shaft and with the volume of the burial chamber only (as an indication of the quantity of grave goods).

Tomb Shaft	Mastaba sq. m	Under-ground cu. m	Chamber cu. m	Mastaba/substructure	Mastaba/chamber
Ratios					
2084 a	45.32	1.813	0.79	25.0	57.37
2085 a	32.78	4.294	1.01	7.6	32.46
2085 c		5.041	0.98	6.5	33.45
2085 d		5.192	1.25	6.3	26.22
2086 a	46.71	4.51	1.98	10.4	23.59
2088 a	61.95	8.9	3.08	7	20.11
2089 a	60.5	6.4	1.41	9.5	42.91
2091 a	70.2	16.29	8.41	4.31	8.35
2091 d		1.29	0.33	(54.4)	(212.7)
2092a a	4.0	5.82	1.48	.7	2.70
2093 a	81.0	19.16	10.88	4.2	7.44
2094 a	75.47	10.21	3.2	7.4	23.58
2094 b		3.51	1.84	(21.5)	(41.02)
2095 c	69.13	.81	0.47	85.3	147.09
2097 a	36.29	12.55	2.35	2.9	15.44
2097' b	32.47	3.28	0.59	9.9	55.03
2098 a	87.5	3.56	1.73	24.6	50.58
2099 a	44.0	3.59	0.36	12.26	122.22
2230 b	92.93	17.79	3.36	5.2	27.66
2231 a	60.5	3.30	0.80	(24.5)	(75.62)
2231 g		3.66	1.56	16.5	38.78
2240 a	82.4	10.09	4.59	8.2	17.95

Fig. 18. Comparative areas of mastaba superstructures to volumes of shafts.

It is clear from this table that mastaba area, chamber volume, and total substructure volume vary independently (as does the volume of the shaft, which is simply the difference between the last two numbers). The ratios vary tremendously: of the mastaba to substructure ratios, only three of the nineteen are within five points of the average; of the mastaba to chamber ratios, only two are. Nor, in either of these cases, does a comparison with the mastaba area form any pattern at all. There was thus no standard ratio of expenditures allocated to these three parts of the mastaba.

The independence of the volume of the shaft from the mastaba area, and hence from the rank of the tomb owner might be attributed to geological factors; for example, the depth of the shafts might be determined by the depth of a particularly good stratum in the bedrock in which chambers might be cut. In fact, however, this does not seem to be the case. There is no clear trend geographically over the cemetery. The three deepest shafts are distributed on the north and south sides of the west end of the cemetery and at the east end. The shallowest are also evenly distributed in the cluster. The depth of a shaft was thus clearly not determined by geology.

While the larger subterranean areas in general appear with the larger mastabas, subterranean area was more clearly related to the period in which the tomb was built. The earlier mastabas seem to have had the most voluminous substructures, and the volume was reduced over time. While the average mastaba area decreased in each

<sup>21</sup> Initial area is used, since the cutting of a subterranean shaft must have preceded initial mastaba construction.

of the four phases of the cluster's construction (as discussed in the section on mastaba area above), during the construction of the major mastabas these decreases were slight, only about 14% between Phase i and Phase ii. Substructures, by contrast, averaged 7.26 cubic meters in Phase i, but only 4.58 cubic meters in Phase ii, a 37% reduction. In Phase i, all ten principal shafts were greater than four cubic meters in volume, while in Phases ii and iii, five of seven were smaller.

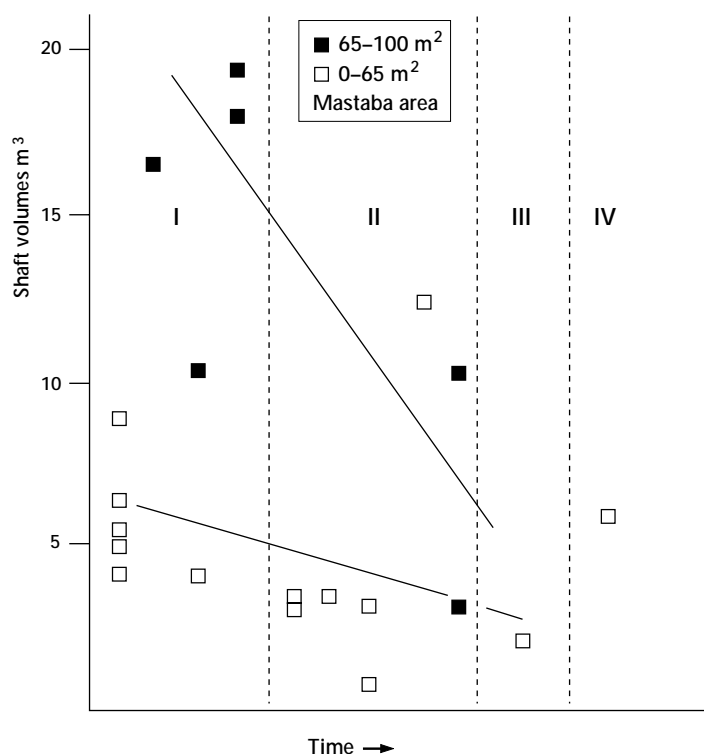


Fig. 19. The subterranean volume of the principal tomb shafts, in chronological order. Numbers indicate the four phases of mastaba construction.

From a plot of these shaft volumes against time (fig. 19), it is clear that two different phenomena are in play. The upper points represent the shafts of the larger tombs, most of which contained coffins or rock-cut burial pits, while the lower line represents the smaller tombs. Over time, the subterranean volumes in both kinds of tombs decline, but those of the largest tombs decline much more sharply. For some reason, a change took place in the general conception of how deep a shaft should be, and smaller chambers with shallower shafts became more normal, at least among the tomb owners in this cluster.

It is interesting to contrast this decline in the area of subterranean construction with the increase of the area of serdabs in the same tombs, discussed above. Since the burial chamber, like the serdab, was an inaccessible part of the tomb in which the likeness of the deceased was preserved, it is tempting to speculate about a functional exchange at this point, in which the serdab took over some function that had previously been filled by the burial chamber.

A functional connection between burial chambers and serdabs is to some extent supported by another postulated relationship between them. From evidence in this cluster, it can be argued that the new "servant models" in some cases represented the occupants of secondary shafts. In one case, as evidenced by the secondary false door

of Ankhimaes, a woman who is depicted as a “servant” in a model was apparently buried in a secondary shaft of the same mastaba. The woman working with Ankhimaes, named Nefertinet, is perhaps to be equated with the daughter of the tomb owner, who is shown playing the harp for him on the east wall of his chapel, Nefret-ser(?) (the last two signs are faint and rather problematic). She may also have been buried in one of the tomb’s several secondary shafts. A third model depicts a man called the ka-priest Nen-ankh, who, as was discussed above, is presumably the identically-named son of a neighboring tomb owner. He may have married into the family and been buried in one of its shafts.

Other models of “servants” dating to the Old Kingdom are specifically identified as daughters and sons, notably those from the serdab of Nikau-Inpu (now at the Museum of the Oriental Institute in Chicago<sup>22</sup>), but these relationships have not to my knowledge been widely discussed in the literature. It may be that the relationships between other “servants” represented in serdabs and the principal tomb owner may be closer than has usually been assumed on the basis of later parallels.

*Grave goods and Mummification.* Some large burial chambers with surviving artifacts hint at rich grave goods; but the contents of these shafts need not have been proportionate to the space available, since so many of the other aspects of the burial seem to have varied independently. Of the primary (usually subterranean and extended) burials, six were either sealed or essentially undisturbed: 2086 a, 2087 a, 2089 a, 2094 b, 2098 a, and 2099 a. Only one primary burial, 2091 A, shows clear evidence of having been disturbed by human forces, although most of the empty chambers were presumably robbed as well. Of the secondary burials (usually above bedrock and contracted), thirty-seven are similarly intact: 2084 b, d, e, f; 2086 b; 2087 d; 2088 b (disturbed, but probably essentially intact), d, f; 2088b a;

2089 b, c, e; 2089a a, b; 2094 e; 2095 a, b, c, d, e(1) (disturbed but probably essentially intact), e(2), f, g, i, k, x; 2097 c, f; 2098 b, e, g, y; 2099 c, f; 2231 b; and 2240 b.

The grave goods found, even in the intact primary burials, were minimal. The only registered objects found in these forty-three burials, beyond bones, were a plaster mask, a coffin, an alabaster headrest, an alabaster cylinder jar, four model alabaster vessels, a beaded copper headband, a flint blade, a Nile-silt ware bowl, and eleven “Meydum” bowls. The richest surviving burial was that of 2094 a, which contained only the alabaster headrest, two “Meydum” bowls and a wooden coffin. This material was found in the principal shaft of a large mastaba, but one that was completely without decoration. It is clear that the owners of these tombs were, in general, not buried with very plentiful or very valuable tomb furnishings, and that the grave robbers knew this. On the other hand, the owners of the most extensive and most elaborately decorated tombs (2088, 2091, 2092+2093, 2097, and 2240), most of whom held the highest or second highest title in the *hntj-š* hierarchy, were not blessed with undisturbed burials. Their burial equipment may have been more valuable and, again, the grave robbers may have known this.

Mummification in the surviving burials seems to have been quite rudimentary. Some remains of linen wrappings were found, but the most elaborately treated body was that in a small intrusive tomb, in which the head and body were coated in plaster and sculpted. This tomb dated to Phase iv, and the more elaborate treatment of the body may have been due to its later date. Partial plaster coatings have been found in tombs as early as the Fourth Dynasty, however.<sup>23</sup>

Extended burials tend to occur in subterranean shafts, while burials in secondary, above-bedrock shafts tend to be contracted. The degree of contraction may be significant, but there is little additional evidence to compare with it. Apparently, however, contraction was not simply a function of the size of the burial chamber. If the drawings on the Tomb Cards are accurate, at least three contracted burials (2084 b, 2088 x, and 2240 d) occur in chambers large enough to allow for fully extended burials.

With rare exceptions, the few preserved grave goods were found in the primary shafts. One secondary shaft, 2095 i, contained a tightly contracted skeleton that wore a copper fillet with an elaborate beaded clasp. A polished Meydum bowl was found in 2099 b, and eight more Meydum vessels filled the shaft of 2230 c. (Interestingly, 2230 c had no chamber or burial. The simplest explanation for the presence of the vessels would be that this and other chamber-less shafts were used to deposit additional funerary equipment for the principal tomb owner, although in the case of 2230 c, the shaft was some distance from the principal burial chamber.)

So far as the contents of burials can be determined from surviving information, there is a general tendency for larger tombs to have richer burials, but again there seems to be no consistent proportioning of resources.

<sup>22</sup> According to the accession notes for this group, five of the models are identified as the son or daughter of the deceased. Daughters are shown grinding grain (OIM 10622) and mixing dough (OIM 10635); sons are shown making loaves (OIM 10624), stirring a pot over a fire (OIM 10629), and poking a furnace (OIM 10634). (I am grateful to the Museum’s curator, Dr. Karen Wilson, for giving me access to these models, and to Dr. Emily Teeter for helping me to locate the relevant information.)

<sup>23</sup> Smith, *HESPOK*, p. 28.

## Conclusions

This initial examination of the factors that can be analyzed has uncovered some suggestive patterns, and it will be interesting to see whether they hold in other parts of the cemetery as well. The apportionment of resources to different aspects of tomb building seems to have been determined by a variety of factors, including rank (affecting mastaba area and position, chapel shape, and the number and kind of texts), wealth (perhaps affecting chapel shape and the amount and quality of the decoration), and date (areas of serdabs and primary shafts, and type of mastaba facings). Literacy and hereditary social class may also have affected the quantity and kind of texts.

Personal preferences seem to have played a more important role among the wealthier and more powerful tomb-owners, to judge from the greater degree of variation at that level. Among other things, however, this initial study demonstrates how dangerous it is to assume that any single aspect of a tomb or burial reflects a single characteristic of the owner. By demonstrating the richness of Old Kingdom mastabas as sources of information about social constraints and individual decisions, it exemplifies an approach to the characteristics of mortuary monuments which may be fruitfully applied to other cemeteries.