The Helwan Cemetery

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The Early Dynastic necropolis at Helwan has produced a significant number of tombs, which allow for insights into the architecture and chronological development of private funerary architecture in Egypt. The architectural and material characteristics of substructures of the two common types as well as the mastaba superstructures of these tombs suggest that while general trends can be observed, there is a high degree of variability among the early tombs. This is particularly obvious when considering the unusual quantity of large, monolithic limestone that was employed in the construction of a small number of elite tombs at Helwan. This form of construction also sheds light on the high level of expertise of the early engineers in the Memphite region as they laid the foundations for monumental stone architecture in Egypt.

History of research

The cemetery known today as Helwan is the largest necropolis of the Early Dynastic Period in Egypt. It was first investigated by the Swedish archaeologist Hjalmar Larsen, who excavated six graves at what he called Maassara in 1937 (Larsen 1940a; 1940b). Shortly after that, in July 1942, the Egyptian archaeologist Zaki Youssef Saad began excavations to the south of where Larsen had been working and called the area Helwan, which is now the established name for the cemetery. Saad worked at this site for over 12 years and uncovered more than 10,000 tombs which he partially published in a series of preliminary reports and monographs (Saad 1942-1969). Later, the Egyptian Antiquities Organisation conducted two more excavation seasons in 1966 and 1975 (El-Banna 1990; Adeeb 1991), and in 1997 the Australian Centre for Egyptology at Macquarie University in Sydney resumed fieldwork that is still on-going (Köhler 1998-2005; Köhler & van den Brink 2002; Köhler & Smythe 2004; Köhler & Jones in press; Smythe 2004; 2008). Apart from the excavators, numerous other scholars have also contributed to the understanding of this important necropolis, most notably Gerhard Haeny (Haeny 1971), Wendy Wood (Wood 1987), David Jeffreys and Anna Tavares (Jeffreys & Tavares 1994), as well as Toby Wilkinson (Wilkinson 1996). As a result, the chronology of the site, the architecture and development of its tombs are increasingly better understood and Helwan thus has the potential to significantly contribute to our knowledge of Early Dynastic private funerary architecture. It must be noted, though, that the tomb plans produced last

century appear to be highly idealized and simplified, as it was a standard of the time. Nevertheless, the more recent work has re-excavated and uncovered by modern methods a fairly representative sample of tombs that will eventually allow for a more precise and comprehensive architectural analysis.

Site location and chronology

The necropolis is located between the modern villages of Ezbet Kamel Sedqi el-Qebleyah in the north and Ezbet el-Walda in the south, on the east side of the Nile. They stretch over a distance of c. 1.5 km from north to south along the riverbank on the Pleistocene palaeofan of Wadi Hof. The palaeofan consists of gravel and sand deposits, interspersed with layers of silts and clays, which form a relatively stable basis into which the tombs are cut.

Although prehistoric artefacts have been found scattered across the site, its main period of occupation probably started in Naqada IIIA and continued well beyond Naqada IIID and Dynasty 2. There is evidence to suggest that certain parts of the site were also occupied throughout much of the Pharaonic period as well as into the Late Roman and medieval eras (Saad 1947; Köhler 2005). The chronological assessment of the Early Dynastic tombs has been aided by their association with royal names and diagnostic artefact groups, such as ceramics and stone vessels, which allow for the definition of several chronological stages within the framework of Naqada III.

Discussion of the tomb architecture

For the purpose of this paper the tombs will be divided into substructures and superstructures, as not all of the graves were observed in a combination of both, which makes a comprehensive typology of their architecture in its entirety difficult. There is also scope to suggest that sub- and superstructures did not necessarily follow a parallel development, as their construction and architecture may have been subject to independent requirements and thus distinct processes of modification. Also, since many of the tombs that Saad had excavated are published often with little detail information, other than a plan, sometimes with sections and a brief description, many specifics still require investigation.

The substructures of the tombs can be broadly divided into pit burials of oval or rectangular shape and different sizes (Type I) as well as tombs with subterranean burial chamber and lateral access (Type II). These two main types have numerous subdivisions and variations, many of which will be discussed here, although their precise typology is awaiting completion pending the end of fieldwork. The majority of the tombs at Helwan are single inhumations built for only one individual, but multiple and secondary burials have been observed as well. The corpses were almost exclusively deposited in a contracted side position with different orientations, most frequently head north facing east or head south facing west, wrapped in textile shrouds or reed mats and placed inside a wooden, clay or reed coffin. Grave goods are placed in and outside the coffin, in the fill or on the surface.

Construction materials

The materials employed in the construction of the tombs vary considerably. Type I tombs are cut into the gravel deposits and the smaller grave pits are usually covered with twigs, branches, reed or just with a layer of mud. Larger tombs are usually roofed with timber beams, which are consolidated by rocks, reed matting, mud and mud bricks. In some cases the remains of wood have been observed in situ and may be identified as local hard wood or imported cedar wood, the latter especially in those cases where the roof spans are wide and the reconstructed length and thickness of the timber are considerable (Saad 1951: pl. 5). Internal walls, such as retaining, support and partition walls, are usually built of mud bricks, rarely also of fieldstones. On occasion, the walls and floor of the burial

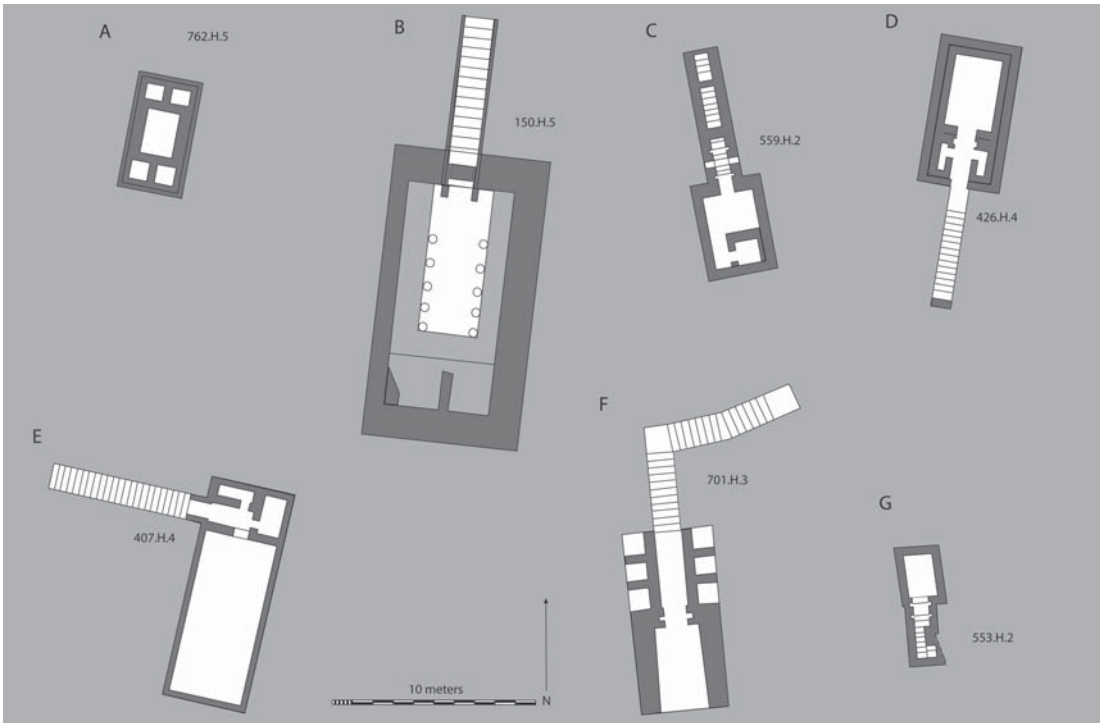


Fig. 1
Selection of tombs of Type I substructures.

chamber are encased with wooden planks, thus creating a wooden compartment that enclosed the burial and associated grave goods (Saad 1951: pl. LI). The size of these wooden structures can be substantial; tomb 150.H.5 (**fig. 1B**), for example, has two parallel rows of five postholes in the ground and along the walls of the substructure that appear to have formed a wooden compartment of about 6 meters length and 3 meters width, and tomb 653.H.4, may have had a compartment of almost 20 meters length and 6 meters width (Saad 1951: pl. 12)[1].

Where Type I tombs have a lateral access the entrance to the burial chamber was protected by one or several portcullis stones of limestone which were inserted from above. An unusual feature of some of the elite tombs at Helwan is the use of large limestone slabs forming the walls, pavement and sometimes the roof construction. As they are one of the most unusual features among Early Dynastic architecture, they will be discussed in a separate section below.

The substructures of Type II tombs required less additional material effort for their construction as they were entirely cut into the gravel deposits. In some cases the walls and ceiling of the subterranean chambers were covered with mud plaster and white lime wash. Rarely, limestone slabs are used as lintels for internal doorways (**fig. 2**). After the funeral, the entrance to the burial chamber

Photo: Tawfik elGazzar

Fig. 2
Limestone door lintel in Op.4/122.

1. We have considered the possibility that the posts could instead have served as roof supports, but in this case, their proximity to the walls would seem to counteract their purpose.

was usually blocked with a mud brick wall and/or a portcullis stone. Sometimes, large boulders were also piled up against the door blocking for further protection. The descent was usually filled with layers of sand and gravel that were sometimes consolidated with mud brick retaining walls for further internal stability.

Tomb morphology

The vast majority of the Helwan tombs are aligned roughly north-south, most probably in parallel with the river and the alluvial plain. Type I tombs include the simplest grave form observed, that is a small and shallow ovoid pit that offers just enough space for a single, contracted burial (= Type IA). Where more effort is invested, the grave pit is usually of a rectilinear shape (= Type IB). The dimensions vary considerably between approximately 1.00 x 0.70 x 0.50 meters to more than 10.00 x 5.00 x 6.00 meters. Depending on the size, the lower part of the grave pit often has two lateral ledges, either cut into the bed rock or built of mud bricks, along the length of the tomb pit which allowed for the emplacement of perpendicular roof beams to create a protected space for the burial and its grave goods (**fig. 3**). Once the grave was charged from above the pit was filled up to the surface and thus sealed. Where the size of the pit allowed, the burial compartment was often encased with mud brick walls and separated from side chambers with the assistance of partition walls (= Type IC), thereby creating a common division into burial chamber plus two, four or six side chambers (**fig. 1A & 3**). Large tombs also had additional storage chambers at a higher level above the burial chamber (*cf.* Saad 1969: pl. 9).

An important variant of this type of tomb has a lateral access in the form of a staircase that enters the substructure either on the shorter side of the tomb, thus in the same axis with the tomb, or on the long side (= Type ID; **fig. 1B-G**). This access is either in a straight line or bent at a right angle and at least one case is known where the staircase makes a 180 degree turn (**fig. 1G**). In a number of instances, there is a distinct pattern of two lateral chambers adjacent to the descent and directly behind the entrance

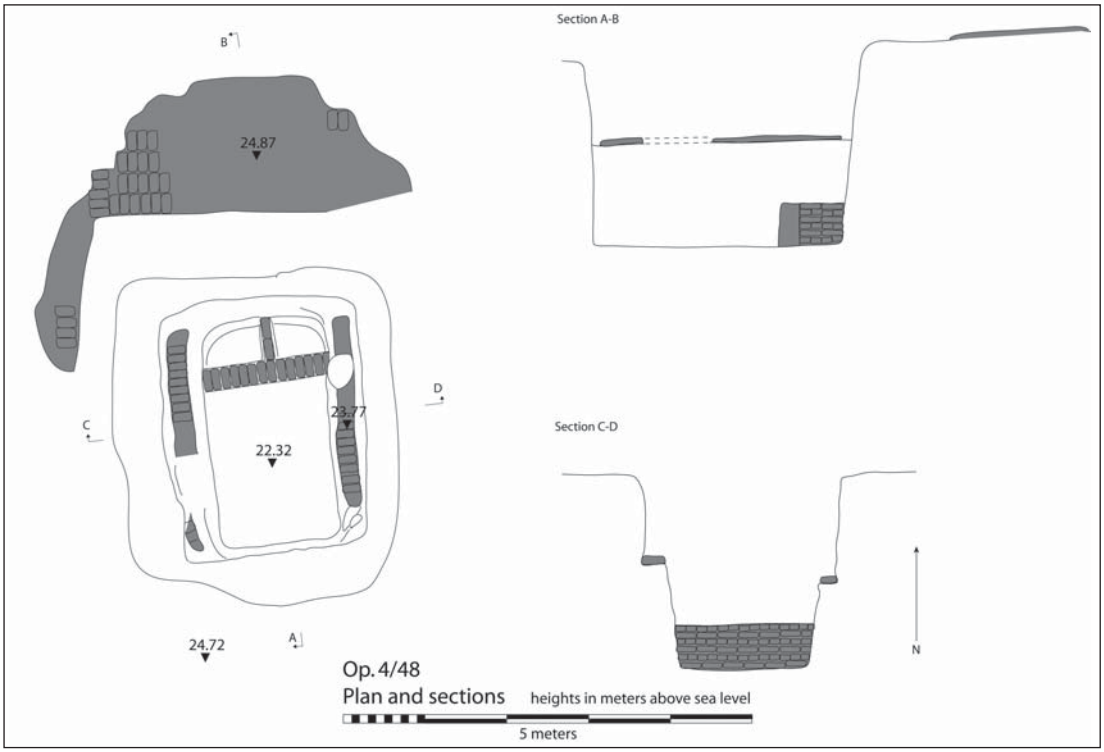


Fig. 3
Tomb Op. 4/48.

(**fig. 1D**). As with Type II tombs, the directionality of the descent, be it from the north, south, east or west, does not appear to follow a particular pattern other than accessibility to the site and to the tombs themselves. In many cases the tombs are located along the edges of intersecting wadis and gullies that lead into the alluvial plain from where the cemetery would have been approached and the descent thus tends to be in line with this approach. In a number of cases, the tomb builders also took advantage of the slope leading up from a wadi and placed the descent against the incline, thus saving time and effort (**fig. 4**).

Type II tombs share this external access but they are different in that their substructure is cut under ground. The size and number of the relatively rectilinear subterranean chambers varies considerably depending on the wealth of the owner, and can range from just one small niche or chamber to large and complex structures with corridors, halls and numerous side chambers and niches (**fig.4 & 5**), leading up to 15 meters into the bedrock. Frequently, there is a larger recess on the west side of the burial chamber that contained the burial and smaller niches, which can be found along the east side. These small niches appear to have had a symbolic purpose as their small size renders their functionality questionable.

The height of the ceiling varies with the overall size of the substructure; the smaller the tomb, the lower the ceiling, and sometimes, the clearance is less than 1.00 meters. Large substructures, however, can have a height of more than 2.00 meters thus allowing an adult to move freely inside. Also the floor levels vary within large structures, especially in the burial recess, which was sometimes observed to be at a higher or lower level in relation to the overall ground level.

The access to Type II substructures is either in the form of a straight or bent staircase with regular steps at intervals that allow a steady descent (= Type IIA; **fig. 4 & 5A-B**),

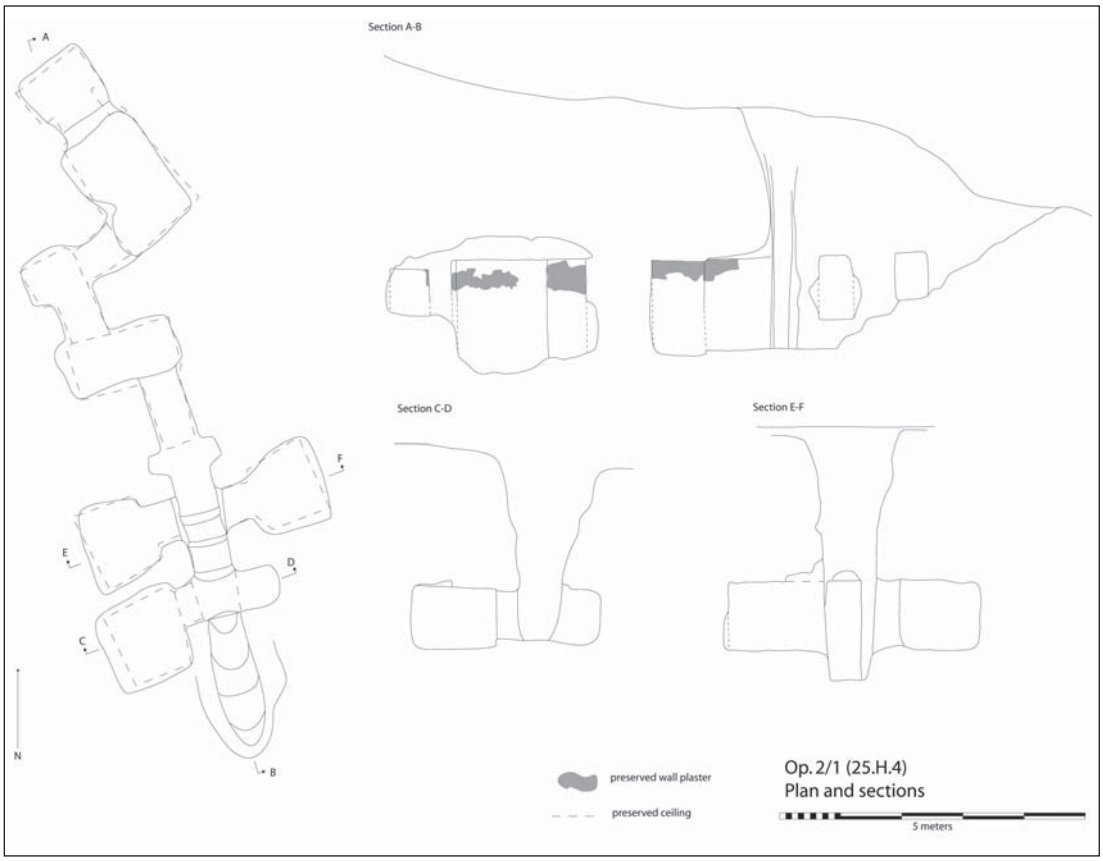


Fig. 4
Tomb Op. 2/1 (25.H.4).

a short staircase with only two or three deep steps of up to 1.5 meters depth (= Type IIB; **fig. 5D, 6 & 7**) or a vertical shaft (Type IIC-D). Vertical shafts have also been observed in combination with staircases, and when this occurs, the shaft is always right in front of the entrance to the burial chamber. It is possible that this additional shaft served for the vertical lowering of the coffin, as the staircases tend to be too steep and narrow to safely convey such a heavy load to a depth of up to 6 meters. On a number of occasions the upper rim of the descent has been lined with mud bricks, which appears to be a feature that was

Fig. 5
Selection of Type II substructures.

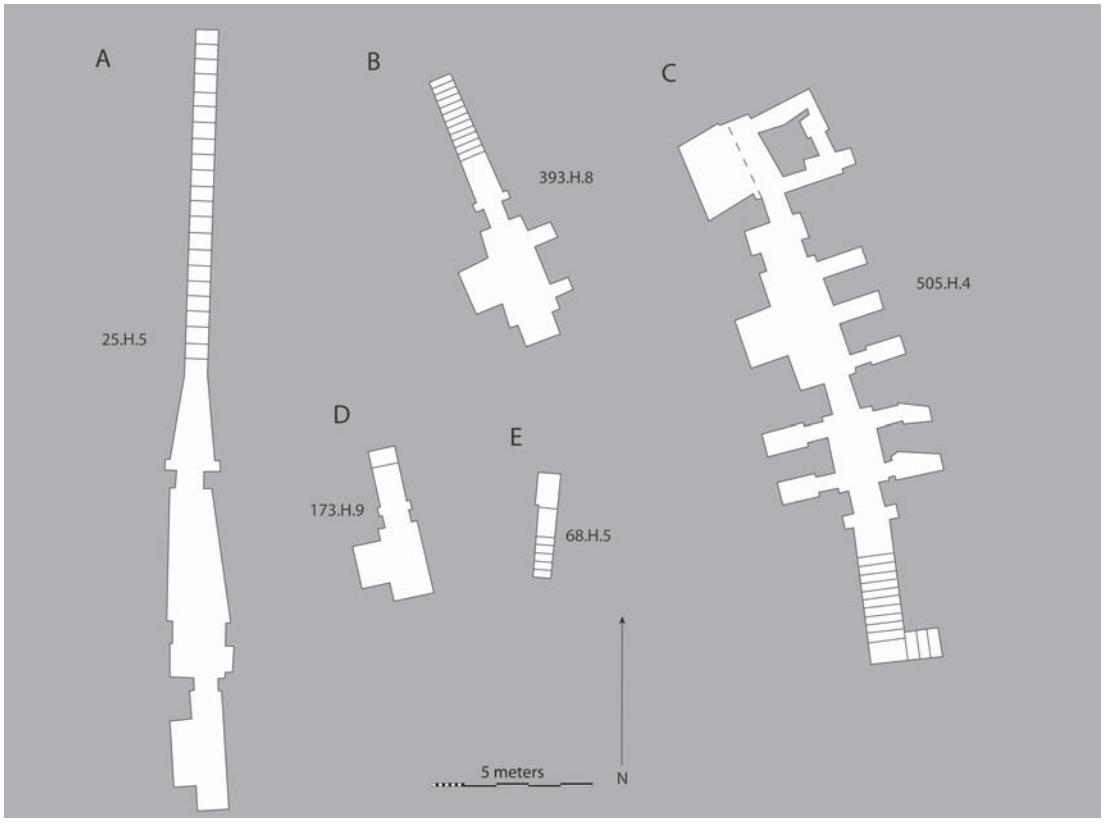
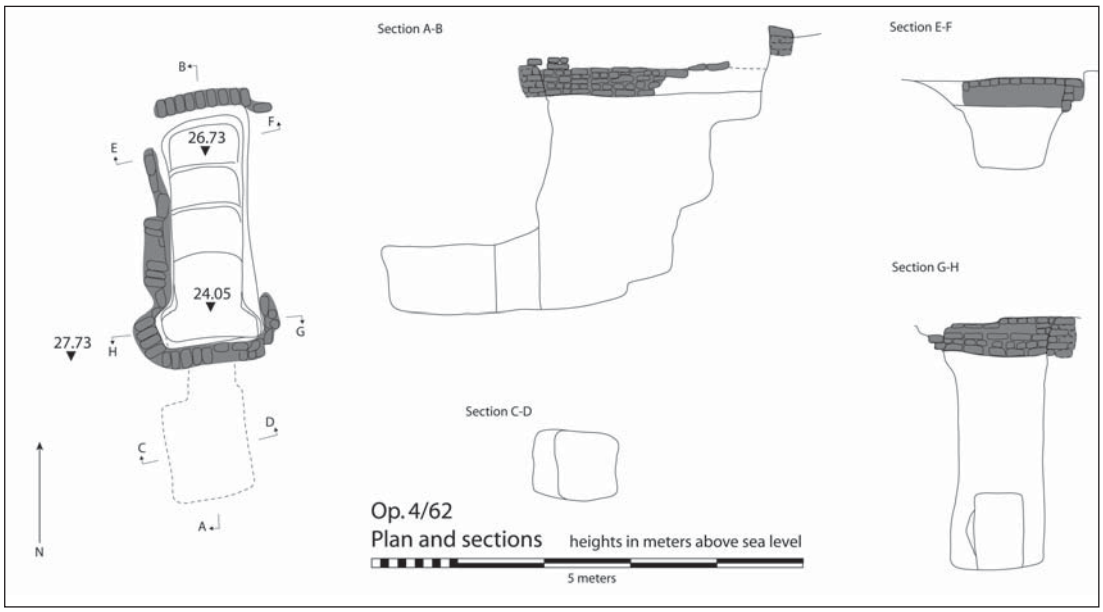


Fig. 6
Tomb Op. 4/62.



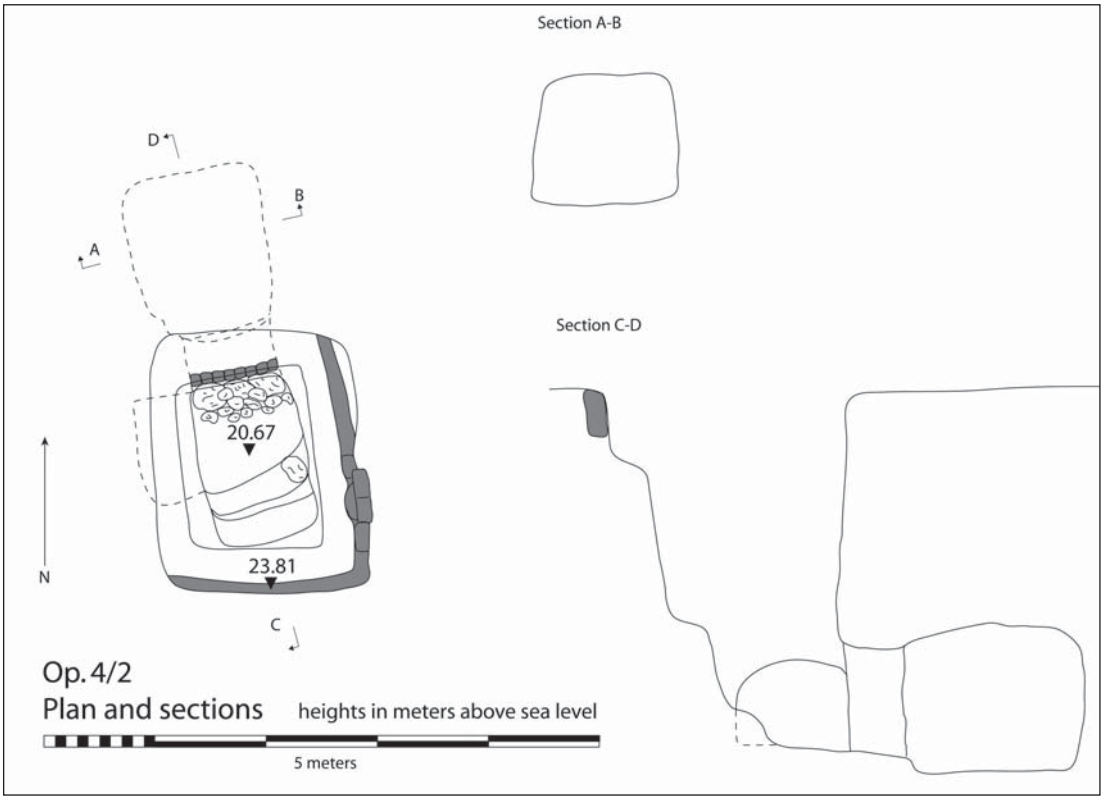


Fig. 7
Tomb Op.4/2.

implemented at an early stage of construction. This can be ascertained on the basis of an unfinished tomb (Op.4/67) without substructure, uncovered during the recent excavations, whose descent ended at about 1 meter below the surface, but whose upper rim was already lined with mud bricks.

The entrance to the burial chamber was usually blocked by a mud brick wall within the doorframe which was often enforced from the outside by large boulders or a portcullis stone (**fig. 7**). This stone slab was lowered via a vertical slot cut into the sides of the descent, thus forming a characteristic T-shape, although the existence of this slot does not necessarily translate into the presence of a portcullis stone. In most cases the door blocking sealed the entirety of the subterranean chambers to protect the integrity of the grave, although up to 4 external side chambers, which are cut into the walls of the descent, have also been noted (**fig. 4**). Due to the lack of specific archaeological evidence, it is currently unclear if these external chambers served the accommodation of later burials or if they were solely intended to contain offerings (Birrell 2000).

Stone tombs

A small number of the early tombs at Helwan contain large amounts of monolithic limestone slabs that most probably were employed for the purpose of securing the burial and its grave goods from plundering. Stone slabs have been used in isolation, for example for the portcullis stones, in larger numbers but only as roof slabs of mud brick substructures or as casing stones for the tomb pit (Saad 1969; Wood 1987; Köhler 1998; 2005).

With one exception, which is probably an Old Kingdom mastaba, all of the stone tombs are of the Type I variant, with and without external access (**fig. 8**). In most cases, only the burial chamber is encased with large rectangular limestone orthostats, and other structural parts of the tomb, such as side chambers and the descent, are built of mud bricks. Often, the floor of the burial chamber is paved with stone and in one tomb also the roof construction is made up of large slabs that span across the substructure, thereby enclosing the entire burial chamber. We take the

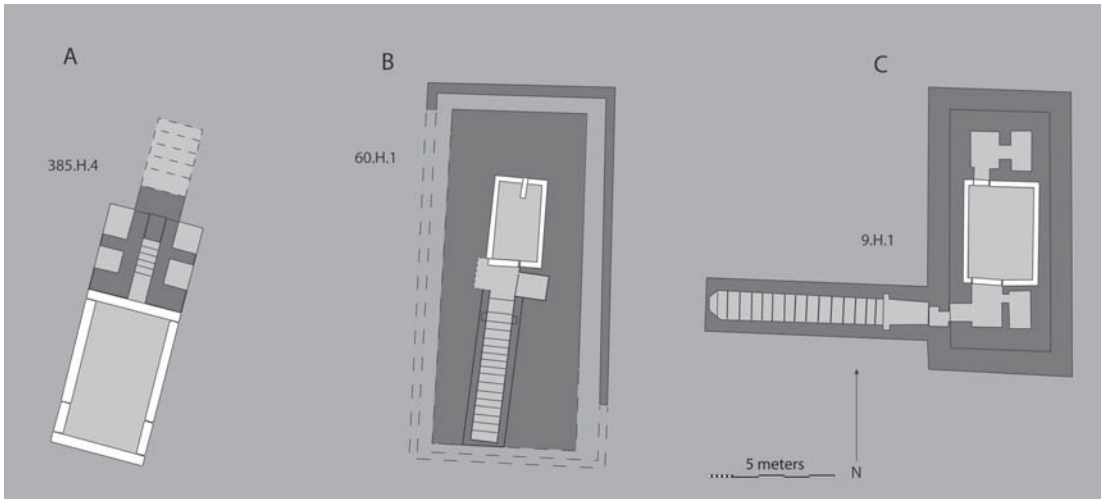


Fig. 8
Selection of stone tombs at Helwan.

opportunity to introduce tomb 60.H.1 here as this particular structure was previously incorrectly identified and published under the number 601.H.1, which itself is only a small mud brick-lined pit tomb and no plans or photographs have been published to date, other than the general plan (scale 1:400) of the cemetery from 1947. The tomb in question is instead 60.H.1, which is located further east and of which a series of unpublished black and white photographs from the time of excavation in 1942 have been made available to the Australian mission[2]. On the basis of these photographs and the 1:400 plan, this tomb can probably be described thus (**fig. 8B & 9-12**): The tomb pit is accessed from the south via a straight mud brick lined staircase and it appears to have been originally protected by 2 portcullis stones. Between them may have been two small niches leading east and west. The entire burial chamber of about 2 x 3.5 meters in size is encased with vertical stone slabs of considerable thickness, and a perpendicular slab was set into the northern wall, thus forming what appears to be a partition wall. The roof is built of horizontal slabs of which one complete and several fragmentary slabs were still observed in situ, embedded underneath the superstructure walls. The plan provided here is based on Saad's 1:400 plan, but it appears as if the thickness of the superstructure walls is inconsistent with the visible remains on the photographs, although there is also significant damage to the walls on the south and west side. What is particularly intriguing are two openings in the northern superstructure wall, located directly above

Fig. 9
The superstructure of tomb 60.H.1 from North.


9

Fig. 10
Tomb 60.H.1 from North-East.


10

2. We are grateful to Mr. Hamdi Youssef and Mr. Mahmud Shazly for making available original prints from their fathers' photographic works which are included here.

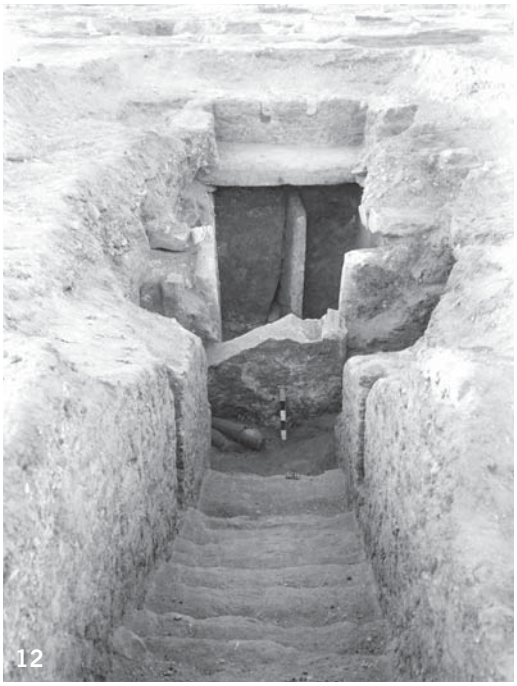


Fig. 11
The substructure of tomb 60.H.1 from South.

Fig. 12
The substructure of tomb 60.H.1 from South after removal of the portcullis stone.

the burial chamber. Of importance is also the observation that one of the portcullis stones was found lying flat on the ground; its removal uncovered two pottery vessels, one of which can be clearly identified as a late Dynasty 1 - early Dynasty 2 wine jar (**fig. 12**). This context has the potential to assist in dating the stone tomb to this period.

Another stone tomb, 40.H.3 or Op.1/1 (**fig. 13**), has been re-excavated by the Australian mission in 1997/98 and thus provides more detailed architectural information. All structural elements of the substructure, including burial chamber, antechambers and staircase as well as the floor of the main chamber, are encased with large stone slabs, some of which reach a height

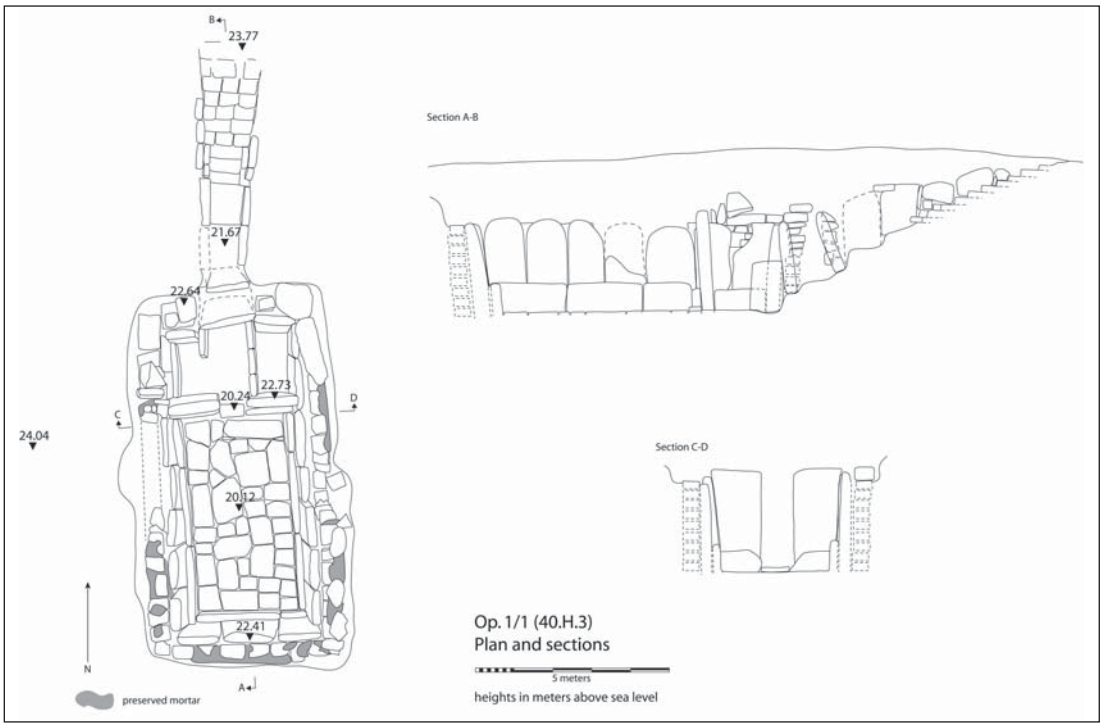


Fig. 13
Tomb Op.1/1 (40.H.3).

of more than 2.5 meters (for detailed plans and descriptions *cf.* Köhler 2005). In addition, there is also an external wall of smaller stone blocks on all three sides of the burial chamber against which the casing slabs lean; these blocks are joined with mortar and thus provide solid support for the vertical wall slabs. There is also evidence to suggest that the stone slabs were specifically shaped prior to installation, which involved, for example, vertical groves that assist in the positioning and aligning of neighbouring slabs, as well as the careful variation in the angles at which the slabs are carved, thereby allowing for an accommodation of inclinations as part of the overall architecture of the tomb. Due to the width of the burial chamber of more than 4 meters at the top of the walls, we propose that its roof was made of timber, most likely cedar wood that was placed across in east-west direction.

The dimensions of the stone slabs used at Helwan occasionally reached 4 meters in length, 2 meters width and 0.40 meters thickness, thus resulting in weights of more than 6 tons of limestone (**fig. 8A**) and obviously requiring considerable engineering skill and labour for their installation. Further, where sufficient detail has been observed, it appears as if the external support walls of smaller stone slabs or mud bricks were carefully calculated as to height and thickness in order to accommodate the load from the walls and roof of the tombs (La Loggia, forthcoming). This all would indicate that there was some form of preparatory planning and design involved which again reflects on the superior skills of the architects and engineers at a time that laid the foundations for monumental stone architecture.

Superstructures

The remains of superstructures at Helwan are not always preserved and if at all, they are often reduced to one or two courses of short sections of mud bricks or even only a muddy discoloration that happens to form a line near a tomb pit. It is very possible that their construction materials, that is mostly mud bricks, timber and occasional stone elements such as door lintels, were reused for new structures once a tomb was abandoned. In spite of this scarcity of material evidence we can suppose that all of the large size tombs and probably many of the smaller ones were marked on the surface in the form of a rectangular superstructure or mastaba that was largely built of mud bricks, plastered and white-washed. Even when there are no traces preserved, the existence of a superstructure can be considered in those cases where adjoining tombs conspicuously avoid the space directly surrounding a certain tomb, and when they are arranged in relatively straight lines that circumscribe an empty space where a superstructure could have been originally positioned (**fig. 14**). The majority of superstructures does not appear to have been accessible, instead they were presumably solid buildings filled with sand, rubble and mud bricks. On occasion, internal walls have been found that divide the mastaba into numerous smaller cells which were individually filled with piles of sand and debris (**fig. 15**). Usually, the size of superstructure varies in proportion with the substructure and substantial mud brick mastabas of up to 40 meters in length have been found above large size burial chambers[3]. This building not only marked the tomb on the surface, but also provided organized space for mortuary rituals that took place after the funeral and thus contributed to the display of wealth at the funeral and beyond.

The superstructure is usually aligned along the same axis as the substructure, *i.e.* north-south, and often encompasses the area including the burial chamber and descent where an external access is present. It can be a free-standing mastaba or a building surrounded by an enclosure wall (**fig. 16**)[4]. The exterior of the mastabas varies between simple rectangular buildings with plain sides,

3. Interestingly, it appears as if the size relation between substructure and superstructure undergoes changes with the beginning of the Old Kingdom when the mastabas tend to be much larger than the burial chamber, thus possibly suggesting a different emphasis on post-funeral activities.

4. Please note that the tomb in Fig. 16B has been incorrectly labelled 1374.H.2 in some of Saad's publications. The 1:400 plan and its entry in the unpublished field diary confirm its correct number as 1473.H.2.

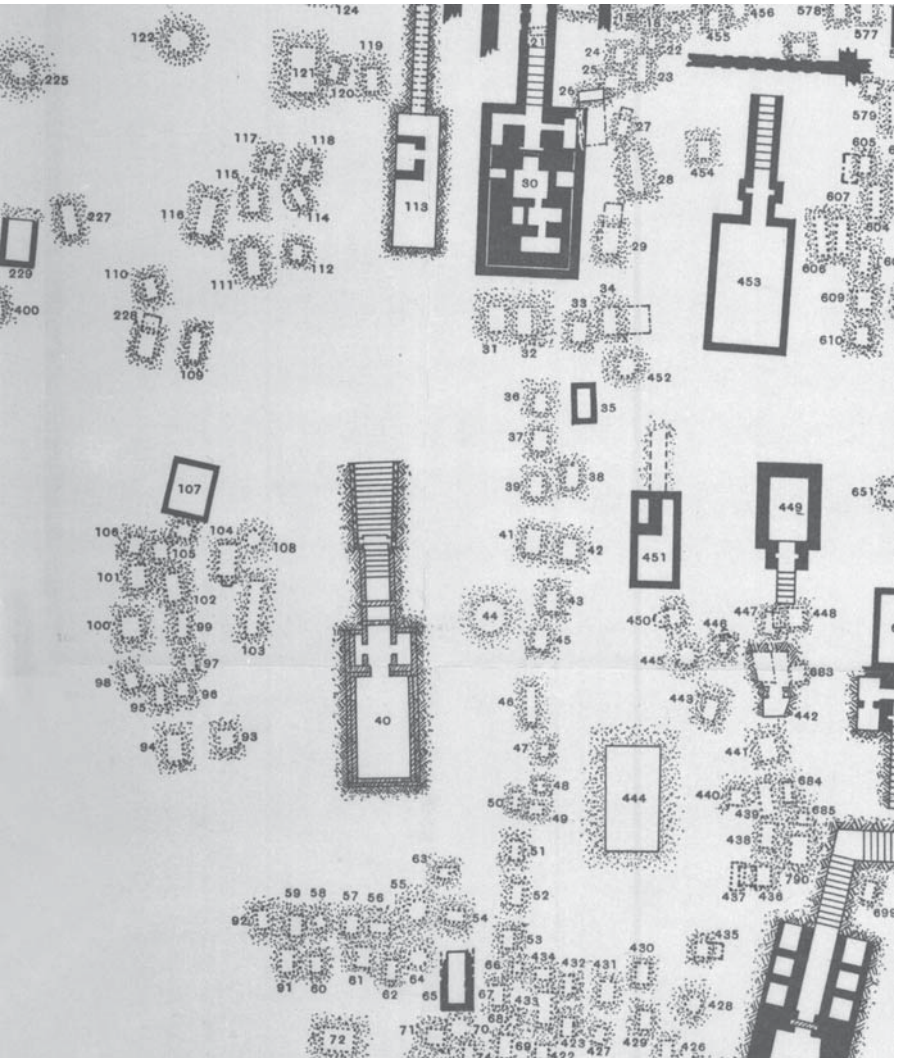


Fig.14
Section from Saad's plan of 1951 showing the area of his 3rd season.

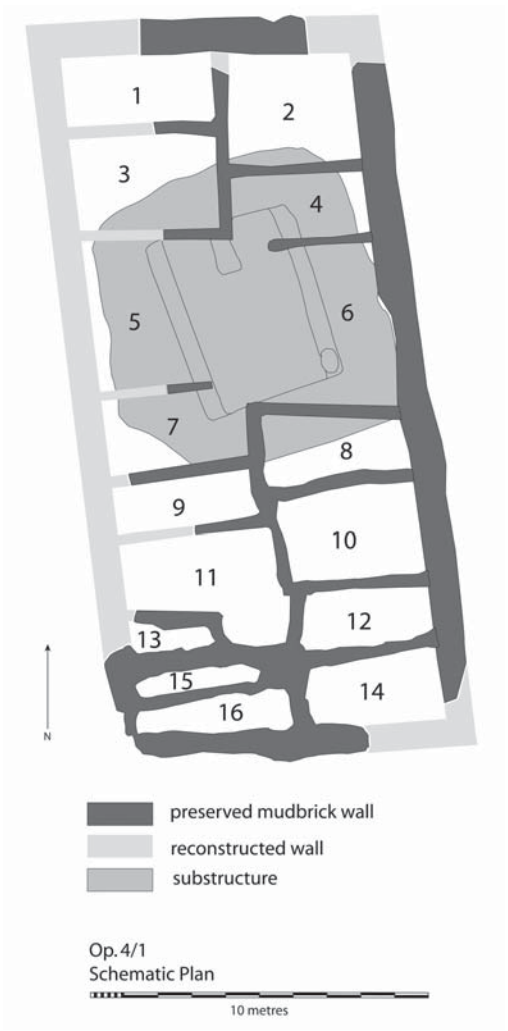


Fig. 15. Tomb Op.4/1.

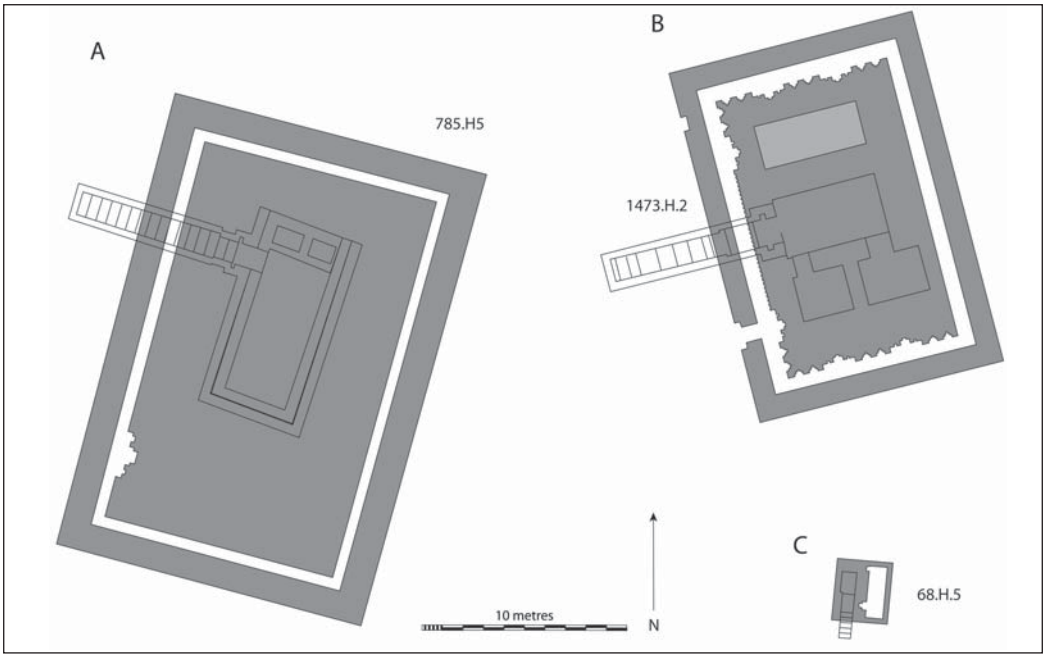


Fig. 16
Selection of superstructures at Helwan.

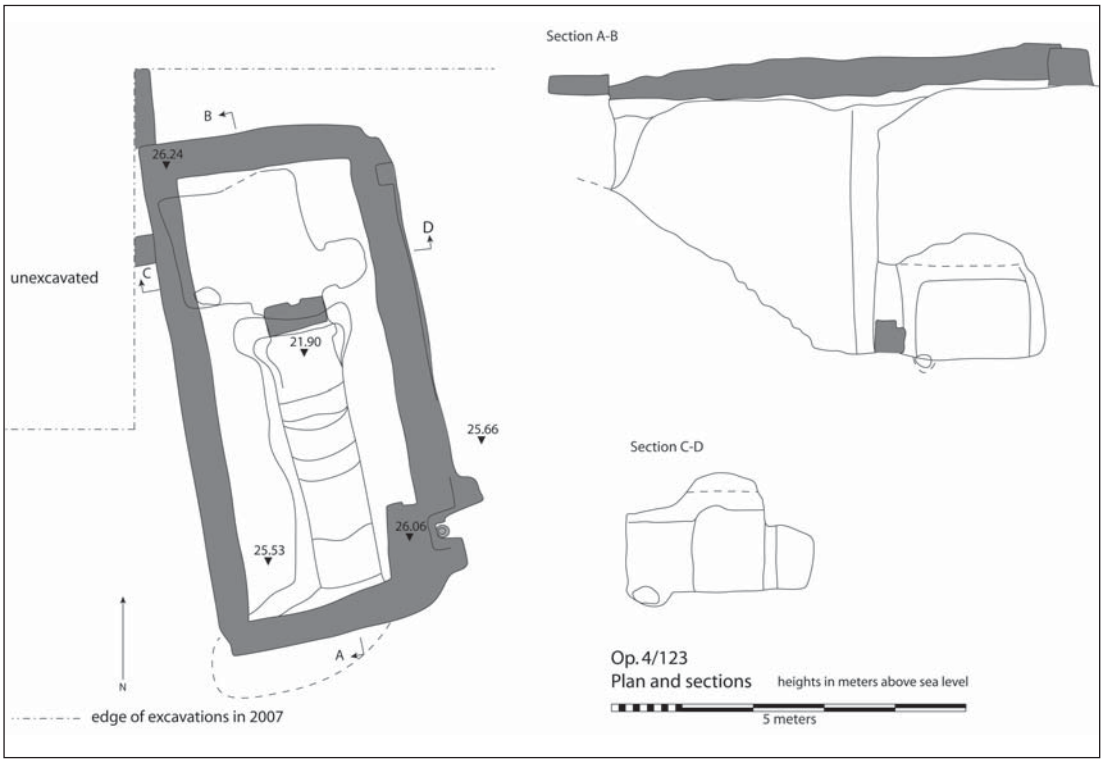


Fig. 17
Tomb Op.4/123.

often with two cult niches on the east or west side of the mastaba, which are either in the exterior façade of the building, or sheltered within a chapel (**fig. 16 & 17**). There are also more complex buildings whose façades have small, regularly dispersed recesses on one or all four sides which can be reconstructed similarly to their monumental counterparts at Giza, Saqqara[5] or Tarkhan[6]. In addition, a larger or more elaborate niche with complex recesses and interred pottery vessels is sometimes located at the southern end of the mastaba where presumably mortuary rituals were performed (Saad 1969: pl. 10; **fig. 17**). These cult niches are functionally and architecturally the predecessors of the Old Kingdom false door. It has been suggested that the more than 40 relief decorated and painted limestone slabs found at Helwan, that bear a representation of the offering scene, can be reconstructed to have been placed in this architectural context[7].

Tomb development and chronology

It should be noted that while George Reisner's fundamental typology of early tombs (Reisner 1936) is certainly important for the understanding of the development of tomb architecture, we have noted, however, that the division into his many subtypes and their distinct distribution between the regions of Egypt may have overly complicated the picture. A key to understanding Early Dynastic private funerary architecture lies in the diversity and individuality of private tombs, especially those at Helwan, that tend to resist a rigid application of Reisner's typology. While his typology does apply in very broad terms, we sense it is more appropriate to refrain from devising too many subtypes and instead to acknowledge that the choice of architecture for a particular tomb was driven by individual preferences

5. See Hendrickx this volume.

6. See Grajetzki thisvolume.

7. These relief slabs have never been found in a primary context within the superstructure and used to be called 'Ceiling Stelae' as their early excavator believed that they were originally installed at the bottom of vertical shafts and in the ceiling of the burial chamber (Saad 1957). This interpretation has long been rejected (Haeny 1971; Köhler & Jones in press).

Date	Proto-Dynastic	Dynasty 1		Dynasty 2			Dynasty 3	Dynasty 4
Date group	IIIA-B	IIIC	IIICD	IIID1	IIID2	IIID3	IV	V
Type IA Simple ovoid pit	S	S	X	X	X	X	X	X
Type IB Simple rectangular pit	S	S	X	X	X	X	X	X
Type IC - With internal subdivisions	?	S	X	X				
Type ID - With lateral access		S	X					
Type I Stone tombs		S	S					
Type IIA With long staircase					X	X	X	
Type IIB With deep staircase					X	X	X	
Type IIC With shaft						X	X	X
Type IID Small and shallow shaft tomb						X	X	X

S = primarily attested in Saad's excavations – X = attested in Op.4

Table 1
Chronology of substructures at Helwan.

and ideologies, family traditions, social differentiation and economy, rather than underlying cultural or historical forces. We also acknowledge that royal architecture has probably influenced general architectural trends, but the tombs at Helwan, in particular the stone tombs, suggest that the private sector often pursued and thus shaped its own architectural preferences and construction methods (see also Junker 1950: 23).

The other difficulty in classifying the large body of tombs at Helwan that Saad had excavated, is that due to the lack of published detail, their precise date range within the Naqada III chronology is often uncertain. It is therefore the aim of the Australian mission to supplement missing data on the chronology of tomb types as well as of architectural developments. To date, 131 tomb structures of the Early Dynastic and early Old Kingdom periods have been excavated in an area designated Operation 4, of which 122 can be classified within a typology of substructures (*cf.* **Table 1**)[8]. The vast majority of these falls into the categories IA and IB. Type IA, a simple ovoid pit, is at 29% clearly the most common substructure type and appears to have been used primarily for very small pit tombs of less than 1 cubic meter in volume. Type IB divides into two subtypes whose distinction is further corroborated by their size; 21% of tombs are simple, rectangular pits of an average of just under 2 cubic meters in volume, whereas 12% of Type IB substructures are characterized by rectangular pit tombs with internal ledges which are also considerably larger at over 13 cubic meters on average. Tombs of Type IC with internal subdivision are only attested twice, one (4/106) has a small side chamber and is just over 8 cubic meters in size, whereas the other (4/48) has two side chambers and measures about 18 cubic meters in volume. The only tomb of Type ID (4/36), which has a straight lateral access from the north, is also relatively large at c. 19 cubic meters. About a third of substructures fall into Type II. Types IIA-C are also

8. The remainder of tombs has been subject to secondary use and alterations, is unfinished or too badly disturbed for a clear classification.

relatively large at just over 20, 8 and 9 cubic meters, respectively, and it appears as if IID tombs are the smaller alternative for these at an average of 1.7 cubic meters.

The date of the tombs in Operation 4 currently ranges from late Dynasty 1 (date group IIICD) to early Old Kingdom (date group V), but their precise chronological evaluation and analysis are pending the end of fieldwork in this area. However, the following observations and trends can be outlined in summary of the evidence from Saad's and our own excavations. Type I grave pits clearly develop out of the prehistoric tradition of tomb architecture and remain the most continuous and frequently employed type of tomb at Helwan throughout Naqada III and beyond. It is not completely replaced with the appearance of the somewhat later Type II, which is probably in part explained with the fact that simple pit graves do not require a lot of effort expenditure and thus lend themselves especially to poorer burials, which is supported by the fact that the majority of these have an average volume of just under 1 cubic meter. At this stage of research it can be proposed that Type I tombs of all sizes are the most common form of grave throughout Naqada IIIA-C (Date groups IIIA-C/D = Protodynastic to the end of Dynasty 1) and small size pit tombs containing contracted burials remain in use well into the early Old Kingdom. The current excavations in Operation 4 have yielded only one Type ID tomb with lateral access (4/36) that has been dated Naqada IIIC3 on the basis of an associated type of cylindrical pottery vessels at a very late stage of its typological development, but we cannot yet confirm if this type of tomb continues or not. The sole tomb type attested in Operation 4 for date group IIID1 (= early Dynasty 2) is the simple Type I pit tomb of different sizes without lateral access. Although Type II tombs seem to appear earlier in Saqqara (Kaiser 1998: 80), their earliest occurrence in Helwan is momentarily placed in date group IIID2. This date is based primarily on associated wine jars of an advanced typological stage and vessel index that can be dated around the middle of Dynasty 2. From this point on larger size substructures of Type I are replaced by Type II substructures, and it is clear that changes in the architecture initially manifest themselves in the context of the wealthier tombs. Type II tombs of the earlier stage tend to have longer staircases while the deep staircase and shaft tombs appear to be more common in the advanced stages of Naqada IIID. As they were built at a time when the cemetery had already substantially filled up, it is possible that space constraints eventually contributed to a length reduction of the descent.

The question of the date of the Helwan stone tombs has repeatedly been raised by numerous scholars (*e.g.* Wood 1987; Arnold 1991: 164, n. 159) and can now, after careful re-excavation of one of them and re-examination of the evidence, possibly be settled. Probably with only one exception, the stone tombs date mid to late Dynasty 1, which can be determined on the basis of associated ceramic artifacts, such as cylindrical vessels and wine jars dating mid-late Naqada IIIC in 90.H.1 (**fig. 18**), as well as close architectural parallels with well-dated Type I tombs at Saqqara and elsewhere. The wine jar that is visible in the photographs of 60.H.1 also appears to be of late Naqada IIIC date, although a position in very early Naqada IIID cannot be excluded. The exception from this group is the large mastaba 287.H.6, whose substructure, consisting of a c. 10 meters deep shaft, burial chamber and 2 side chambers, is entirely encased with regular stone slabs of different sizes and whose superstructure consist of a combination of stone masonry and mud bricks. This form of architecture has close parallels in the early Old Kingdom, especially at sites like Saqqara and Meydum and we there-

Fig. 18
The northern side chambers of tomb 9.H.1 with pottery in-situ.

fore endorse earlier suggestions that this tomb probably dates early Old Kingdom (Wood 1987: 67; Jeffreys & Tavares 1994: 153).
Although such large, monolithic stone slabs have been employed for select structural elements in the construction of early tombs at other sites, such as Abydos, Saqqara, Tarkhan, the use of stone at Helwan is unusual. The degree at which monolithic limestone has been employed at Helwan already during Dynasty 1 and the fact that this was in the context of private tombs, make this cemetery unique and indeed pivotal for the early development of funerary architecture in Egypt.
Due to the limited amount of material evidence for superstructures, only very general observations can be provided at this point. The earliest evidence for a superstructure has been observed in the case of a comparatively large tomb excavated by Saad, 563.H.11, dating Naqada IIIA2, although not much detail other than a brief verbal description in one of his field diaries has survived (Köhler 2004b: 307). During the early stages of Naqada III the larger superstructures tend to be more complex, that is, more frequently niched on all sides than later, and they seem to assume a more simple design with plain sides and only two niches after Naqada IIIC. Finally, the recent excavations have yielded evidence for two large superstructures with complex interior subdivision into cells (Op. 4/1 and 4/7) that have been placed within date groups IIID3 and IV and that have counterparts at Saqqara (Quibell 1923). Both structures, however, did not produce any evidence for a burial and may therefore be interpreted as cenotaphs.
As to the chronology and development of the offering niche and false door in early mastabas there is very little contextual information that would provide conclusive evidence, but the corpus of over 40 relief decorated stone slabs, which represents more than half of the known and provenanced relief slabs with offering scene, has the potential to assist in this question. As observed above, where a superstructure is sufficiently preserved, the southern cult niche tends to be larger and more elaborate and thus seems to be the best candidate for the emplacement of a lintel stone with offering scene, similar to later false doors. The most recent excavations in Operation 4 have yielded numerous fragments of one such decorated stone slab in the debris surrounding the southern niche of 4/123 and the position of this lintel stone can hence be reconstructed here.
The typology and relative chronology of the relief slabs themselves would suggest that they start in mid to late Dynasty 1 and at this point already follow a distinct pattern that consists of their division into a central decorated panel and undecorated flanges, which were presumably inserted into and embedded within the mud brick work of the niche at a higher level, thus forming a door lintel that shows the offering scene and associated lists of offerings (**fig. 19**). Depending on the width of the niche, a small section of the flanges may have been visible on either

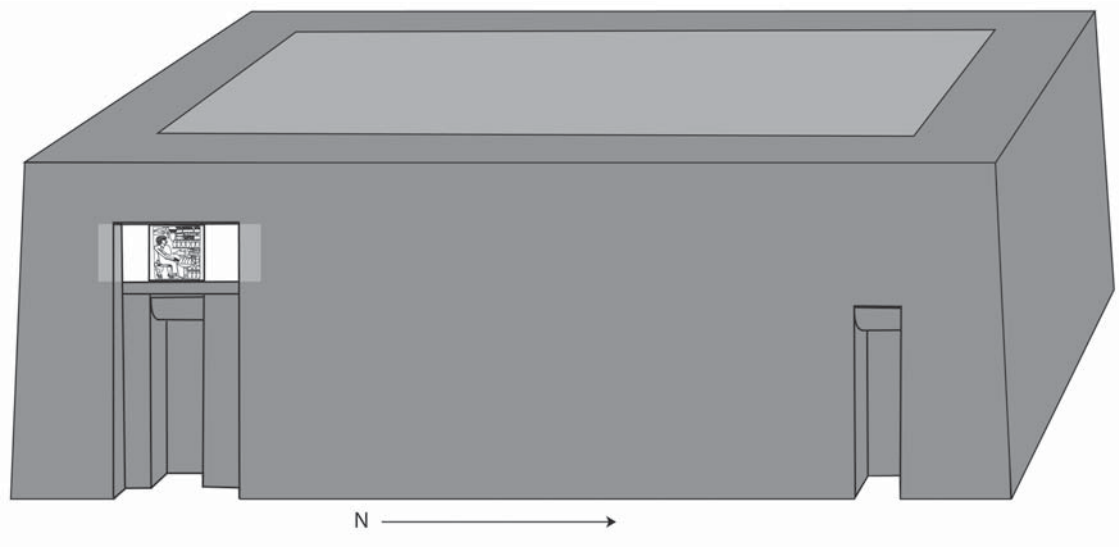


Fig. 19
Artistic reconstruction of a typical mastaba of Dynasty 2 at Helwan.

side of the central panel, which probably explains the development of the apertures in Old Kingdom false doors of stone or wood. Some of the Helwan slabs themselves also display architectural features, such as upper and lower lintels or curved lower edges, similar to the later door drums, which would have further elaborated the appearance of the cult niche. In this form, the Helwan slabs continue to be in use throughout Dynasty 2 and well into the early Old Kingdom at which point they have close parallels in the early false door lintels at Meydum, Dahshur and Saqqara, as well as the corpus of the Giza slab stelae (*cf.* Der Manuelian 2003; Köhler & Jones in press).

Conclusion

With more than 10,000 private tombs, Helwan is larger than any other site in Egypt dating to the Early Dynastic Period. Its tombs offer a wide array of architectural features, construction materials and variations thereof that would suggest that private funerary architecture of this period was a relatively individualistic and heterogeneous facet of mortuary culture. Its many different expressions, be it the size of tomb, orientation, structure and materials were largely influenced by the ancient people's personal preferences and economic means. This funerary variability is an important aspect of early Egyptian culture that in the past has been tightly categorized by scholars who aimed at a more classificatory and almost taxonomist result that was sought to reflect overall historical trends, rather than cultural and social process. Certainly, the architects of the time were guided by existing traditions and technologies, but the variety and obvious interest in developing adequate means and exploring alternatives to create the secure and appropriate space for a deceased person, sometimes involving an incredible effort such as the utilization of up to 70 metric tons of monolithic limestone for the construction of one tomb, document the real dynamics that were behind and that drove the development of private funerary architecture.

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