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Macramallah's Rectangle: Re-Examining a First Dynasty Egyptian Cemetery

by

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Dedicated to my family,

in grateful thanks for many phone calls.

Abstract

Macramallah's Rectangle, a single-period First Dynasty cemetery located on the Saqqara Plateau, presents a rare opportunity to re-examine previously published material and construct a deeper understanding of the cemetery and its context. Through a combination of quantitative and qualitative methods, this thesis thoroughly explores the aspects of ordinary life in the capital region of Early Dynastic Egypt accessible through mortuary contexts. This analysis focuses in particular on the detailed discussion of sex, age, and status on an individual and group level. Previously, Macramallah's Rectangle was often thought to be the site of human sacrifice during royal funerary rites. With a more detailed examination of aspects of the cemetery and its context, more prosaic explanations emerge. These prosaicisms build archaeological understanding of a time and people in transition, and explore how that transition translated to the public at large.

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Chapter One: An Introduction to Macramallah's Rectangle

INTRODUCTION

Macramallah's Rectangle is an understudied First Dynasty Egyptian cemetery located at the north end of the Saqqara Plateau, isolated from other First Dynasty sites by hundreds of metres. Rizkallah Macramallah discovered and excavated the site while he was searching for a location to use as a debris pile during excavations at the Serapeum. Macramallah thought the tombs remarkable because they represented some of the very few non-elite tombs of this period found largely undisturbed, and the only non-elite affiliated tombs found on the Saqqara Plateau (Macramallah, 1940). Since Macramallah's report, the class and affiliation of the cemetery has been debated by multiple authors.

All research using this site is conducted at a disadvantage. The excavation was not conducted in reasonable living memory. In addition, Khalid Waheed, the Chief Inspector at Saqqara (March 2011) and personnel at the Egyptian Museum have indicated that they do not retain any records or provenanced materials from this excavation, including skeletal material. Macramallah's report included a thorough grave register with artefacts and grave types carefully categorized. However, he developed his own classification systems, and many of his artefact class descriptions are too vague to use in direct comparison with other sites and systems. While it appears that the grave architecture and artefacts have consistent parallels to mid First Dynasty sites, the information will not allow quantitative comparisons on a meaningful level.

The researcher is left with the site report, previous bodies of work based on this report, and a small number of visually identified plaques in the Egyptian Museum in Cairo. Errors in the numbering and enumeration of artefacts occur on the map and in the text of the report, some of which have been perpetuated in later works. The unique nature of the site justifies its re-examination under different paradigms and using different

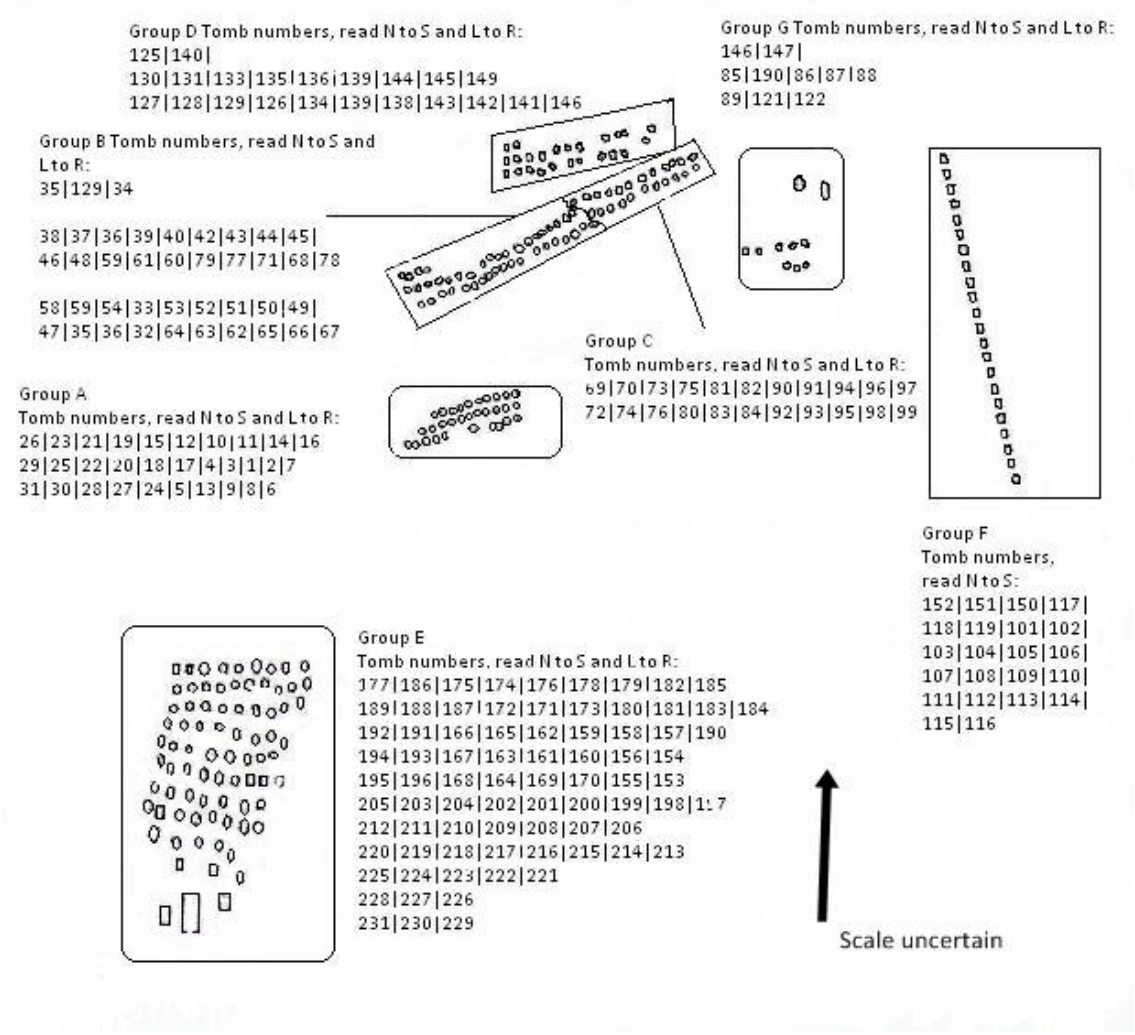
methods, but the researcher bear in mind that the results fundamentally do not allow direct comparison with other sites. Comparison is possible, and useful, but should be conducted at a meta-analysis level, facilitating comparison in kind rather than comparison of exacts.

The research presented in the following chapters is an example of the type of foundational re-examination of an individual site that can in future be utilized on the multiple site comparative level. This research aims to clarify the substance of the cemetery at Macramallah's Rectangle, examining who is buried where, with what, and how, so that a final analysis can argue why individuals were buried in this place at this time.

INITIAL EXCAVATION

Macramallah's (1940) report contained a palaeopathology chapter by Derry (1940). Unfortunately, but typically of the time, the palaeopathological material focussed on skull metrics rather than systematic data aggregation for the whole body. Venturing further into the realm of palaeopathological findings is problematic. More modern areas of inquiry such as dental health, joint wear, and evidence of minor congenital abnormalities or nutritional deficits would likely not have been focal points of investigation in the 1940s, and there is no realistic possibility of reconstructing their occurrence. This is a great, but not uncommon loss. Please see Figure 1-1, below, for a labelled map of Macramallah's Rectangle.

Figure 1-1: Macramallah's Rectangle



Modified from Macramallah (1940)

FURTHER RESEARCH

The report issued by Batrawi and Morant (1957) was the next publication focussing on Macramallah's Rectangle. Apparently, the skeletal material was still available to researchers in the early 1950s, and was lost after this point. Batrawi and Morant conducted a series of metric analyses on the remains. Two parts of their work require elaboration: sex balance and the dynastic race theory. Batrawi and Morant state that all of the early material (i.e. First Dynasty) from Macramallah's Rectangle is male. However, they were not working with the full set of material. Macramallah (1940) and Derry (1940) both clearly state that females and juveniles were buried in Macramallah's Rectangle. It is likely that Batrawi and Morant examined only male skulls to facilitate

their statistics. Secondly, Batrawi and Morant's article is based on the dynastic race theory, which stipulates that the culture who built the pyramids was of a measurably different origin than the Predynastic inhabitants of the Nile Valley. However, this theory has long been discredited. Batrawi and Morant's paper, like Derry's, is not particularly helpful in illuminating a modern understanding of the people buried at Macramallah's Rectangle.

After Batrawi and Morant, Macramallah's Rectangle was largely ignored until Werner Kaiser re-interpreted the site in 1985. Kaiser's (1985) analysis focussed on the similarities between Macramallah's Rectangle and subsidiary burials at ruler's tombs and funerary enclosures of the First Dynasty. Based on these similarities, he proposed that at least part of the cemetery was constructed at one time, and filled during the funerary rites of King Den, likely for his embalming. He elaborated on the relatively regular construction of the rows of tombs, their general similarity, and the sex imbalance recorded by Macramallah. Kaiser suggested that there was a permanent or temporary structure in the central space of the rectangle that once held the body of King Den, and that Macramallah's Rectangle was organized around this central space in the same way that subsidiary burials were organized around the permanent

Kaiser (1985) suggested that Group G, Group D, and the eastern portion of Group B/C were not necessarily simultaneous with Groups A, the western half of Group B/C, Group E, and Group F. His argument was that the irregularity of these groups, the changed general orientation, and the slight overlap in Group B/C indicated that these tombs may have been filled in later, potentially through to the end of the First Dynasty. Kaiser never stated conclusively that this was his belief, but raised it as a possibility for consideration. However, he did not analyze Groups B and C separately; given the temporal separation he suggested, this is striking. Additionally, his relocation of some of the lost or unreadable graves missing from Macramallah's map problematically ignored strong

evidence in the form of pot seals dating Group G (of the very unusual orientation) to the reign of Den, rather than later.

In keeping with his suggestion of a temporal separation between the initial, ceremonially-established rectangular cemetery and the irregular fill-in rows of much poorer individuals, Kaiser (1985) also suggested that Cylinder Type A (found mostly in Groups C and D) was derivative of Cylinder Type B (found in most of the rest of the cemetery). However, such a derivative form could be either temporal or simultaneous but cost or status related. Kaiser (1985) also argued that burial accoutrements, particularly coffins and mats, are so intermixed in Group B/C that it renders the suggestion of later, smaller fill-in graves with mats, few goods, and Type A cylinder vessels problematic. Kaiser (1985) remarked on the different sex and age ratios in different tomb groups, but did not write further on the matter; he suggested that the male dominated nature of the buried population is related to the cemetery's ceremonial function.

Kaiser (1985) considered the possibility of a workers' or officials' cemetery, which he stated would explain the apparent grave size, sex ratio, and equipment differential between grave groups. However, he considered the simultaneity of grave groups E, A, and F, and the relationship of these tomb groups to the central space absolutely clear. His argument for the ritual and sacrificial nature of the cemetery focussed on the presence of a *central ritual space* and his argument that Group F, in particular, must have been absolutely simultaneous, and that Group E could not have been dug and then occupied by natural deaths. However, Kaiser also noted that should a structure have existed in the central space, it is probable that Macramallah would have found it. Some of these points are addressed in the chapter on the purpose of Macramallah's Rectangle. However, it should be noted that at no point does Kaiser make mention of the possible existence of even very temporary markers or superstructures, or the significance of living memory in planning a cemetery.

Kaiser (1985) specifically suggested a very long, narrow wooden building, with an entrance at the large tomb T146 and T147 of Group G. He suggests that while Macramallah's Rectangle could be regarded as the valley enclosure of King Den, the cemetery is more likely related to King Den's embalming ceremony. Many later authors have continued to look at the site in a ceremonial context.

The next researcher to publish on Macramallah's Rectangle was Swelim (1991). He focused on the middle Saqqara area as a whole, but was interested primarily in what he called, "great rectangular monuments" (Swelim, 1991: 389) without further subdivision by purported purpose. He commented on Group F, which he notes may be subsidiary to a rectangular brick monument such those seen at Abydos. He also specifically states that this entire area is located in a depression relative to its surroundings, with each side approximately 15-20 m higher than Macramallah's Rectangle. The orientation of Group F is noted at 11 degrees off of north. Swelim noted the existence of other tombs from the first dynasty in the area, but he did not date or discuss the others, although he referenced Kaiser's proposal for a cult area of Den. Additionally, it is important to note that Swelim himself did not propose that the rectangular monument must have been centred between the grave groups. Swelim also stated that other subdivisions/areas of Middle Saqqara may hold further rectangular monuments without subsidiary tombs. Finally, Swelim suggested a series of line-of-sight relationships between the rectangular monuments in the area, particularly the Second Dynasty constructions.

The Egypt Exploration Society has conducted a survey through most of the Memphis area throughout much of the last twenty years. The project was primarily focussed on reconstructing the landscape, especially the course of the Nile, of Early Dynastic Memphis and its surrounds, and integrating cemetery and monument locations into a deeper understanding of the landscape that would illuminate additional settlement locations (Jeffreys and Tavares, 1994). Jeffreys and Tavares (1994) summarized many of the local cemeteries from the Predynastic and Early Dynastic periods. They commented

explicitly on the First and Dynasty elite mastabas of Saqqara along the escarpment, and elaborated on their structures and architecture. They also noted the absence of "medium-sized tombs of the First Dynasty," at Saqqara (1994: 148), as well as greater diversity in the Second Dynasty.

Jeffreys and Tavares (1994) noted that the North Saqqara tombs align to the escarpment on a NW-SE line, closely related to the area topography for prominence and access. They also mention non-elite cemeteries in the area, including West Abusir (since reused as an Islamic cemetery). Macramallah's Rectangle is mentioned, with a suggestion of further graves, as primarily composed of shallow cist burials cut into gravel, with only a few in Group E more deeply dug. Jeffreys and Tavares (1994) commented on the approximate north-south orientation of Group F. They stated that although a suggestion had been made that the graves were subsidiary tombs of a large First Dynasty mastaba, no such remains are visible, and their resistivity work found no evidence of such construction. The northerly position of this cemetery and other small tombs is used to argue for a northerly approach to the plateau, while the larger monuments may have been provided with individual approaches. See Figure 1-2, below, for the location of the Memphis area, and Figure1-3 for local reference points.

Figure 1-2: First Dynasty Egypt: Memphis and Abydos

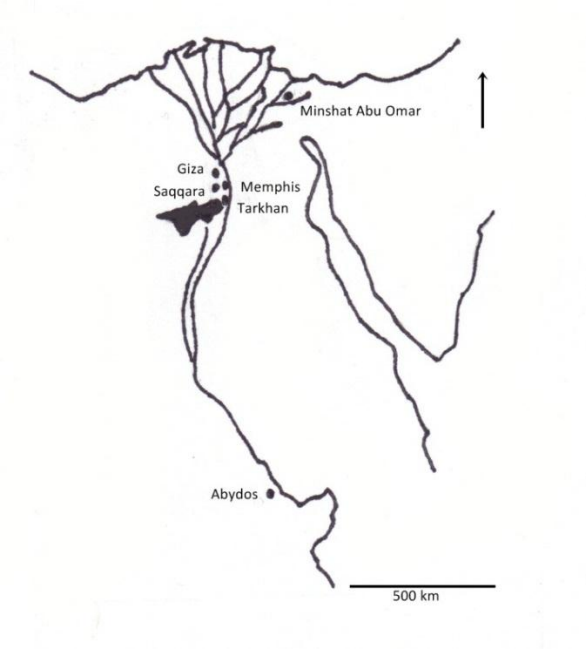
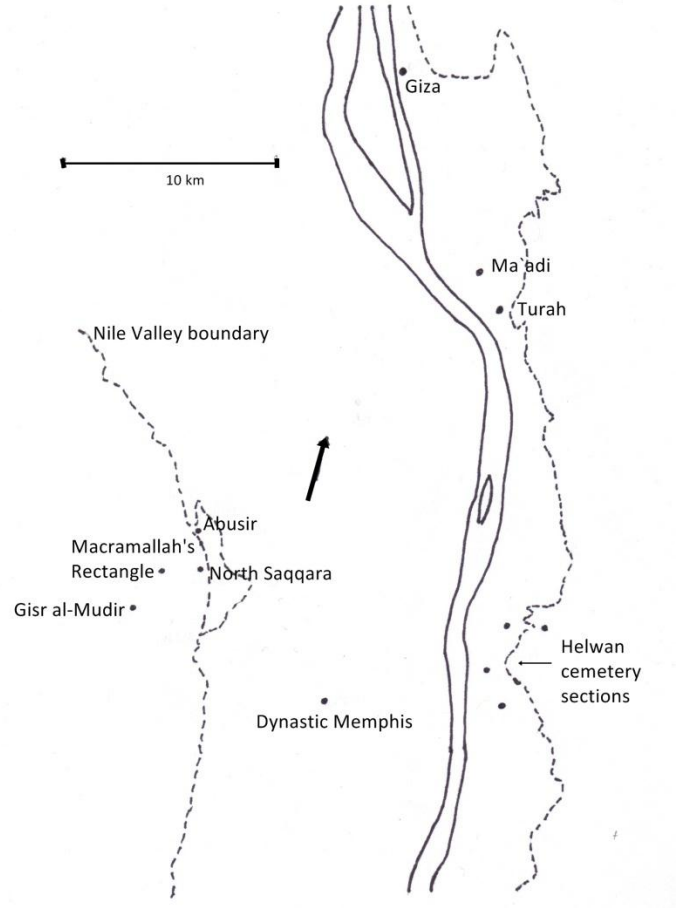


Figure 1-3: First Dynasty Memphis and its Surrounds



Jeffreys and Tavares (1994) discussed the difficulty of comparative studies using Helwan, as the excavation notes were never fully published. However, their summary made a few geographic notes of importance in consideration of Macramallah's Rectangle: the suggestions that tombs may have been approached by flood gullies, the observation that smaller burials are consistently lower in elevation, and that in the case of both Helwan and Saqqara, the earliest construction is generally closest to the agricultural boundary, and that the water level and location in the Early Dynastic seems to have been in a state of change.. Finally, and critically, the authors reiterated that the Early Dynastic *town* of Memphis has never been found in situ, but argued that the earliest settlement was on the west bank of the Nile, close to the elite tombs, and the crowding in the south was caused by settlement drift following the retreating Nile. They suggested an elevation difference between the Saqqara escarpment and the settlement below of approximately 35m.

In 2000, Mathieson published an update of the National Museums of Scotland Saqqara Survey Project that summarized the decade of survey work they had undertaken. The team for this project included Tavares, cited previously. This project surveyed three square kilometres of the Saqqara Plateau using both ground penetrating radar and resistivity. The results of their survey indicated a few keys points: the Abusir Lake would have been quite stable through time, and that there are mud brick structures along the eastern valley access route, and a possible continuation of the mastaba field along to the Sacred Animal Necropolis. The survey examined the area of the Serapeum in greater detail, hoping to find animal galleries. However, deep aeolian sands, rebuilding, and modern destruction made the signatures in the area unreliable. Mathieson notes that, "the location of some of the Predynastic graves shown to be in this area by Macramallah was visible on the GPR scans." (Mathieson 2000: 35). Further details were disrupted, but the author makes no mention of structures in the central space, or of large constructions in this area, rather than to the east or south. In this case, the term Predynastic is likely due to differing terminology, as Mathieson clearly cited the original field report on Macramallah's Rectangle.

A later article regarding the geophysical survey by Mathieson and Dittmer (2007) highlighted the complexity of the Abusir Lake structures. The authors suggested, based on the appearance of streets and direction of building, that this group of structures consists either of undiscovered mastabas tombs with subsidiary and internal construction, or possibly, "storage, workshop facilities, and living quarters for the many priests and worker required by the necropolis organization." (Mathieson and Dittmer, 2007: 83). The lake itself appears to have been subject to inundation but not consistently full of water. This most recent report also verifies that in their North Temple and Serapeum area of investigation, the burials described by Macramallah are visible as small circular indications; given that the tombs are dug shallow and generally without mud brick, they would not be expected to show strongly via resistivity. Please see Figure 1-4, below, which illustrates the difficulty of discovering further structures without extensive excavation.

Figure 1-4: Landscape Looking East from Macramallah's Rectangle to Cultivation Area

Photo taken 01 March 2011. Note the water tower in the background is four stories tall.

The next examination of examine Macramallah's Rectangle was Morris, in 2008. She published a brief study which essentially supported Kaiser's interpretation of a cult space, but specifically suggested that the entire cemetery had been constructed at once and filled during a sacrificial event during the funeral of King Den. Morris emphasized the newness of the First Dynasty, and the upheaval from what the Predynastic burial locations and ways of constructing society. Morris focussed greatly on a sensual and immersive post-processual interpretation of the site, and constructed a vivid and dynamic image of the sacrificial rite. She also clearly interpreted all of the First Dynasty subsidiary graves at Abydos as those of sacrificed people. Morris mentioned evidence that the individuals interred around funerary enclosures were better nutritioned that those burial around tombs of kings, which suggests different social statuses; Morris extended these statements to infer that sacrificial cemeteries express significant differences in social status through spatial patterning.

Morris identified spatial and patterning similarities between Macramallah's Rectangle and other funerary enclosures and subsidiary burials at tombs, such as that of Hor Aha. These included a dominant population of young males and the presence of a group with eleven rows (of three tombs each) with a single grave at one boundary; she suggested this configuration represents a military guard, and noted the presence of young lions. However, later she wrote that the actual population present in any one of these sacrificial situations changes with each reign. Morris also noted the presence of a clear path to the south west in many of the Umm el-Qa'ab complexes.

Morris (2008) suggested that the uncertainty surrounding the identification of Den's funerary enclosure could support Kaiser's notion of a death ritual nearer the new capital so that its inhabitants could see or participate in the ritual. She also argued that the architectural and structural differences between Macramallah's Rectangle and the Abydos subsidiary graves could be due to the difference between enacting a similar ritual in the north and the south; alternatively, there could be more sacrificial

cemeteries similar to Macramallah's Rectangle not yet been identified. The retainers were, in Morris' view, laid out in orderly rows based on their social status surrounding the central space where the body of King Den would have lain.

In identifying similarities to other subsidiary cemeteries in order to support a sacrificial interpretation, Morris (2008) placed great importance on the rarity of female burials, and particularly, on the apparent absence of female burials in Group E. Based on the inscribed vessel found in Group E, Morris suggested that the cemetery is affiliated with a particular estate that supplied the king with an unknown commodity (2008: 24). Morris also presented parallels in grave goods between Macramallah's Rectangle (particularly Group E) and Saqqara mastabas, including T3506. She also mentioned the restricted occurrence of grave goods such as animal bones, model boats, and other rare items in Group E. Some of these items also occur elsewhere in the cemetery. Morris noted the common occurrence of groups of ten Type B cylinder vessels in Group E and A. However, this grouping also occurs in Group B, which occurrence Morris dismissed. Morris noted no concentrations of wives or young soldiers. Morris expressed clearly that the front ranks (south-facing) of each tomb group contain individuals of higher status than ranks to the north.

Morris (2008) noted the greater consistency of organization, grave size, and equipment in Group F, as well as the proliferation of flint implements, rare in the rest of the cemetery. Flint artefacts may have served a symbolic purpose. If there had been a royal funerary ritual on the site, Group F would have been intimately involved. Finally, Morris concluded that the sacrificed retainers in the reign of King Den appear to have been a heterogeneous group with a variety of statuses, some perhaps considered unimportant, while others merited individual acknowledgement and preferential treatment. Morris ascribed particular, although unspecified, meaning to the cardinal directions of the retainers burials, and specified that the order and organization of the burials contrasts strongly with contemporary cemeteries of accretion.

The most recent article on Macramallah's Rectangle was published by Baka in 2011. He examined the purpose of the cemetery, focussing almost entirely on the topography and visibility of the local area, although he also touched on ground surveys. He suggested that rather than a discrete cemetery, the area might be a conjunction of a number of burial sites, parts of which might be connected to cemeteries not yet found or excavated. Baka agreed with Macramallah's assessment of the cemetery as middle class, and believed that there was significant evidence of central planning or of a ritual use for the central space. Baka was not convinced by evidence for retainer sacrifice in Early Dynastic Egypt, and was particularly skeptical of its application at Macramallah's Rectangle.

In particular, Baka suggested that Group F may be subsidiary to a yet-unknown mastaba, which presence is suggested by mudbrick debris and a potential cultic area discovered a kilometre and a half away. Baka highlighted the irregularities of the cemetery in his argument for mostly-natural accretion of graves; in particular, he stressed that Group G is inconsistent with a ceremonial central space. Baka strongly emphasized the disorder of the tombs and the inconsistencies in their spacing. He also stated that it is typical for cemeteries to contain more male officials than their wives, but did not further explore the relationship between sexes in this cemetery, or mention the juveniles interred at Macramallah's Rectangle.

CONCLUSION

Macramallah's Rectangle has been approached by researchers in a variety of ways, resulting in a several interpretations. All of the interpretive options, however, have boiled down to two: the cemetery is mostly or entirely the result of a retainer sacrifice event, or the cemetery is a result of natural accretion of tombs of middle class individuals who may or may not have any link to each other. However, some of the commonalities in these analyses deserve consideration. Other than basic statements that some of the grave groups are richer than others, little attempt has been made to

identify methods of marking status *within* the smaller grave groups, or some of the deeper implications of the pattern of tomb violation.

Similarly, although it has been stated that females occupied lower social positions because they are not interred in Group E, there has been little examination of the relationships between sex and age groups within as well as between grave groups. Finally, although many of these authors have attempted to determine the purpose for which Macramallah's Rectangle was established, none of the proposed explanations account for both the admittedly idiosyncratic location and construction of the cemetery and lack of convincing support for simultaneous construction. The papers which follow will address these avenues of inquiry and productively deepen archaeological understanding of Macramallah's Rectangle in its temporal, physical, and cultural context.

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Chapter Two: Broader Contexts for Macramallah's Rectangle

INTRODUCTION

This literature review focuses on the context in which the cemetery of Macramallah's Rectangle was originally constructed and used, primarily during the First Dynasty reign of King Den. While context can be a very specific word, archaeologically speaking, it is also a large concept that examines the interacting factors which combine in a unique way at any particular moment and location. In the case of Macramallah's Rectangle, three main aspects form a basis for site interpretation: the background fabric of the period, the significance of cemeteries to First Dynasty Egyptians, and cultural perceptions of appropriate body disposal.

Literature regarding Macramallah's Rectangle, specifically, has been reviewed in more detail separately, in the following chapter. The following discussion focuses solely on the larger and more general scale to provide a comparative context and background for the detailed analysis of Macramallah's Rectangle.

BACKGROUND FABRIC

The background fabric of a society at any given moment includes all of the assumptions and stresses that affect peoples' daily lives. In the case of Memphis-area First Dynasty Egypt, this fabric included a changed political structure and developing bureaucracy, local environmental factors that affected the landscape, and the social web of norms and beliefs. This section will briefly review each of these aspects in turn, focussing on current understandings of each factor, but discussing the development of knowledge and theories as appropriate.

Political Background

Although the capital of ancient Egypt had moved to Memphis by the time of King Den, no remains of the First Dynasty city have been found. It is likely that the city has either

been built over or buried in alluvium; all that remained visible are small outlying settlements, and a number of cemeteries (Bard, 2000). During this period of growth and prosperity, many new settlements and associated cemeteries were established in the Memphis area (Bard, 2000). The city of Memphis itself seems to have fed into many cemeteries, the largest of which were the mortuary plateau area of Saqqara, and Helwan on the east bank of the Nile (Jeffreys and Tavares, 1994).

King Den is widely understood to have been the fifth king of the First Dynasty, fitting in somewhere around 3000-2800 BCE, SD 81 (Petrie et al., 1913; Wilkinson, 1996; Wengrow, 2006), although the dates of his reign have not been fully reconstructed (Emery, 1938; Wilkinson, 1999). Although "Den" is the currently accepted name for this ruler, archaeologists and linguists have referred to him by different names, the most common of which have been "Udimu" or "Dewen," but "Setui" was also used (Petrie, 1901; Wilkinson, 1999; Rice, 2003). Den was probably the son of Djet and Merneith; Djet (the previous king) died in Den's childhood at some point, and Merneith ruled as regent on his behalf for a number of years (Wilkinson, 1999; Kahl, 2006; Wengrow, 2006). Textual references occasionally list Merneith *after* Den, likely due to her lesser status as Regent (Kahl, 2006). Den seems to have had an extraordinarily long and stable reign. Vessel fragments reference a second *sed* festival, which suggests a reign of at least 32 years (Wilkinson, 1999), while other estimates range as high as approximately half a century (Wenke, 2009). Den's tomb at Abydos had been found prior to WWI, although his funerary enclosure has not been firmly identified (Bard, 2000).

Den's reign was widely recognized as a period of both great government expansion, and a flowering of artistic and architecture endeavour, the memory of which lasted into the New Kingdom (Rice, 2003). Borders extended along the Nile valley from the First Cataract at Aswan to the Delta (Bard, 2000). Many of the iconic symbols of Egyptian kingship, including frontier campaigns, smiting depictions, use of the double crown, and use of the "dual king" title, seem to first have been used during the reign of Den

(Wilkinson, 1999; Rice, 2003). Widely distributed pot-sealings bearing the mark of Den show that his influence stretched into the Negev and Palestine; and that after his reign, Egypt's foreign contacts diminished over the reigns of several kings (Rice, 2003), while labels attest to his frontier campaigns and trade (Wilkinson, 1999; Bard, 2000; Wenke, 2009). There have been more fragments of Syro-Palestinian vessels found in contexts dated to King Den than any other king of the Early Dynastic (Wilkinson, 1999). This observation is supported by Macramallah's finds of multiple types of Syro-Palestinian vessels at Macramallah's Rectangle, suggesting that access to foreign wares (or their imitations) was not limited to the high elite (Macramallah, 1940).

Den seems to have initiated massive administrative and infrastructure reforms during his reign (Rice, 2003). Although at this period the kings and royal family were likely still buried at Abydos, the elite administrators and office-holders were largely buried along the cliff edge at North Saqqara (Bard, 2000); and more of these burials belong to the reign of Den than to any other time period, as well as elite tombs at Helwan and Abu-Roash, all in the capital region (Wilkinson, 1999). The addition of more high officials may have led to cemetery overcrowding at North Saqqara (Wilkinson, 1996). Wilkinson (1999) also suggests that the proliferation of titles, including a translation of "controller," supports administrative reforms. The Palermo Stone states that a census was conducted during the reign of Den, which is a likely accompaniment to reform (Wilkinson, 1999). Many of the first references to the treasury departments are on labels from Den's period, as well as the names of two chancellors. The second chancellor, Hemaka, was undoubtedly extremely powerful (Wilkinson, 1999; Rice, 2003; Wenke, 2009). Wenke (2009) argued specifically that this administrative growth was an attempt to limit the power of outlying nomes, and increase unity.

During Den's kingship, emphasis on individual elite displays of wealth and status in mortuary contexts increased alongside the numbers of administrators. Many, although perhaps not all, of these administrators were in some way related to the king. Gifts and displays created strong links between the elite and their king, which required continued

largess as well as continued service. Socially elite individuals began to consciously emulate royal burials in the construction of their own tombs, although more humbly (Bard, 2000; Wenke, 2009). Under Den, elite tombs become larger; the highest elite have complex structures similar to royal tombs (such as Hemaka), while elites at a lower level still received very large mastabas, sometimes with tumuli or stepped platforms, and significant numbers of grave goods including foreign wares or local imitations (Wilkinson, 1999). Particularly in the capital region, displays of personal status become extremely important to the elite and their families in cemeteries. Engles (1990) specifically notes a trickle-down delay in elite emulations of royal, which he used to argue that the early stairway tombs of Kafr Ghattati were later in date than King Den.

Environmental Context

While some of the cemetery and settlement choices made by Early Dynastic Egyptians today seem impractical, some significant local environmental differences in the First Dynasty affected the placement of structures, and views encountered along some of the approaches. Elite tombs and cemetery constructions were intended to have an individual and group landscape effect emphasizing their grandeur. Grandeur is part of the reason that larger Egyptian tombs are generally located at higher elevations along cliff edges, away from arable land (Jeffreys and Tavares, 1994; Ikram, 2003), while lower status cemeteries at Helwan and on the west bank near Memphis (such as Ma`adi) were located in valleys and on gravel fans (Jeffreys and Tavares 1994).

During the First Dynasty, the northern approach to the Saqqara Plateau would have looked very different than today. According to recent geophysical surveys of the area, a Remnant Lake of the Abusir Lake would have been filled with water at least occasionally during inundation, and it is likely that the lake and wadi north of Macramallah's Rectangle served as a connection to the valley floor. Although the purpose of the new structures discovered during the course of this survey is unclear, it is possible that the route past Macramallah's Rectangle towards the elite tombs may have been quite

bustling at times, and close to water sources. (Mattieson and Dittmer, 2007). It is entirely possible that Macramallah's Rectangle, situated close to the wadi in a natural depression (Swelim ,1991), was not considered an elevated location.

The local environment during the First Dynasty was somewhat more complex than at present. With increased water in the Abusir valley, Jeffreys and Tavares (1994) believe that some of the constructions in North Saqqara relate to Abusir, rather than to the main river valley. Jeffreys and Tavares (1994) also suggest that the initial focus of Memphite activity was slightly northwards, and that canals and ports may have been added south of the city later on.

Social/Economic Context

The social context of First Dynasty Egypt was complex and changing. Textual evidence (mostly in stamp seal form), funerary architecture, and goods show that full time craftspeople were employed and supported by the crown prior to the First Dynasty (Bard, 2000). There is no evidence of civil or political unrest at the passage of power from Djet to Merneith (as regent) and thence to her son Den. Royal estates, which performed specialized economic functions and were a key part of the later Egyptian economy, are known since Djet; and at least one was created for or by Den (Wilkinson, 1999). Departments for commodities like oil and pigs are also known from around this time (Wilkinson, 1999). Some apparent growth in economic organization is likely due to increased bureaucracy resulting in more records. But along with bureaucratic growth and temple growth (Wilkinson, 1999; Wenke, 2009), Den also facilitated or caused economic growth and organization into lasting structures.

The First Dynasty marks the appearance of shifts in burial customs. For example, since the very late Predynastic, burial practises had been gradually shifting so that the deceased were placed with their heads to the north, rather than to the south (Spence, 2010). Other changes include reductions in the number of palettes, increasing numbers

and varieties of stone vessels, and in some locations, reduction in the amount of personal adornment in tombs (Petrie, 1914).

Changes in materials accompanying burials may reflect only changing patterns of burial deposition, rather than changed patterns in daily life. It is unclear whether these patterns reflect wholesale changes in pattern, changes in mortuary pattern, or local pattern alteration (Grajetzki, 2003; Grajetzki ,2010). Most of the artefacts of this period are relatively comparable to those in the periods immediately before and following, which suggests that however broad the organizational changes, the tools of people's daily life and self-expression did not suddenly shift. The lack of First Dynasty tomb paintings makes comparisons between daily life and funeral equipment very difficult. The sheer proliferation of cemeteries and settlements in the Memphis area may suggest a degree of urbanization or productivity intensification (Bard, 2000).

Some authors (Emery, 1961) have suggested artisans may have been buried with the tools or results of their trade so that the tools could accompany them into the afterlife, and have identified examples including potters and painters in subsidiary graves at Saqqara (Emery, 1954). The increasing presence of walled cities and towns in the Early Dynastic overall suggests some degree of movement away from the small village system (Lehner, 2010). The primary extra-familial association of any given non-elite individual may have been to a village, a profession, or to a patron or their estate. Trigger (1993) estimates that only a small part of the population would have been farmers.

Class and status expression became increasingly important from the Predynastic period through to the monumental and highly hierarchal structures of the Old Kingdom. Macramallah (1940) defined Macramallah's Rectangle as a middle-class cemetery. That definition is somewhat problematic, because researchers are not sure exactly how Egyptians thought of class and status in the First Dynasty. Textual evidence suggests that the primary distinction was something similar to "elite/official" versus public, and that

different professions were recognized as likely to lead to greater wealth and power (Grajetzki, 2010). Alternatively, some authors suggest that minor officials and artisans would have been perceived as a distinct class (Emery, 1961; Wilkinson, 1996). The presence or size of an impoverished, slave, or outcast group has not been established, although it is probable. As most evidence from the Early Dynastic is mortuary, the thousands of Egyptians "missing" from known cemeteries are likely related to the eventual disposal of this group (Murray, 1956).

The primary unit of Egyptian society at this point in time was an adult male, and the females and children associated with him through kinship or household ties. The Early Dynastic and Old Kingdom differ from later periods because family tombs are uncommon; most burials are individual (Saad, 1969). However, many cemeteries are not sex and age balanced, illustrating likely burial of women and children elsewhere (Petrie, 1914; Macramallah, 1940).

Historical ancient Egypt was dominated by males, and most elite administrative or professional roles were not realistically open to women (Wilfong, 2010). Largely because masculinity was the assumed default for most of both ancient Egyptian history and modern investigations of it, very little work appears to have been conducted on the construction of masculinity in First Dynasty Egypt (Wilfong, 2010). Overall, men have richer and more elite burials than women between at least the Early Dynastic through New Kingdom periods (Wilfong, 2010).

To access femininity in early Egypt, researchers rely on figural representations and mortuary analysis prior to written records and tomb paintings. The use of biological sex (from skeletal material) to infer gender and gender performance, let alone the status or social context of that performance, is admittedly problematic. Lacking other avenues of reconstructing these performances, reliance on imperfect evidence is also necessary. Although not entirely accurate, such methods access the majority of individuals in most

populations (Kamp, 2001).

The Egyptians valued women highly, or at least qualities associated with the feminine: youth, slender beauty, and fertility (Szpakowska, 2008; Graves-Brown, 2010). Reproductive health was a significant medical focus (Szpakowska, 2008). It is widely agreed that the onset of menstruation was an indication of marriageability and transition to adulthood (Szpakowska, 2008; Graves-Brown, 2010). However, the actual age of perceived maturity and age of marriage are hotly debated.

Some researchers have suggested that Predynastic Egyptian women had generally greater status and freedom than women of later Egyptian periods (Savage, 2000; Graves-Brown, 2010). This belief reflects a common trend amongst cultures that transition from small scale hunting and gathering to agriculture or more rigidly hierarchal, state level societies. Savage (2000) and others have attempted to distinguish between the onset of patriarchy at the advent of agriculture versus political centralization in Ancient Egypt. Savage (2000) argued that if the status of women had diminished at the onset of agriculture, there should be little apparent difference between the status of women in the Predynastic and Early Dynastic periods.

It is important to differentiate between status accompanied by power, and that which is role-bound without significant power; later periods of Egyptian history make it clear that respect for mothers and motherhood was very important to the culture, and could impact inheritance rights (Szpakowska, 2008). Much of the information about women's legal status is unclear. It is difficult to distinguish between legal or technical equality and functional daily equality (Graves-Brown, 2010). Marriage amongst Egyptians is not well understood, although newly married couples normally resided at the husband's property (Szpakowska, 2008). Because divorces were a legal proceeding, more documentation exists. Divorce settlements often reflect women's similar legal rights but comparatively lower power, wealth, and status (Szpakowksa, 2008; Graves-Brown, 2010). Women may have contributed substantially to household income, but appear to

have primarily worked in the home; and are depicted in later imagery smaller than males or in a secondary position, similar to children (Graves-Brown, 2010).

There is no evidence of preferential male survival or female infanticide prior to the Greeks (Graves-Brown, 2010). Women shared in the same afterlife as men, and burials were similar (Robins, 1993). Male and female bodies were treated in the same way at least from the Old Kingdom; grave equipment was also generally similar. However, less is known about non-elite tombs. The difference between legal and social equality is demonstrated by the almost universal burial of women in their husband or father's tomb, once multiple burial became popular. Women were also usually listed on a man's funerary stelae; the circumstances under which women would have their own stelae are unclear (Robins, 1993).

Savage (2000) argues that at Naga ed-Der, women in the late Predynastic held equal status to men in mortuary contexts. Based on the original excavation report for cemetery N7000 (Lythgoe, 1965), Savage constructed sets of linked artefacts correlating to social roles, often ritual in nature. He used these links to argue that Predynastic women had access to more social roles than later women, or possibly concurrent men. Lords (2008) focused on specific artefacts, arguing that certain ornamental objects may mark age- and gender-specific ritual. By contrast, Ellis (1996) in his analysis of social status at Tarkhan, argued that increasing numbers of personal adornments worn by women related fundamentally to male control and competition. In effect, Ellis used the apparent increased specific wealth expressions of female graves to argue for increased *male* hierarchy in a competitive social context as Ancient Egypt became more centralized over the Early Dynastic period.

The reign of Den is of specific interest to gender researchers because Merneith, Den's mother, acted as regent for some time during his childhood (Wilkinson, 1999; Kahl, 2006). Merneith is included on king lists, and has very large memorials near her son's at

Abydos and Saqqara. However, Kahl (2006) also stated that records such as cylinder seals list her name *after* Den's, rather than chronologically. As the king's mother, her status was lower than her son's. At Tarkhan, Petrie et al. (1913) note specifically that there are more elite female tombs during the period of Merneith's probable regency that at any other single time in the Predynastic and Early Dynastic assemblage; implicitly, Petrie connected this trend to female wielded status, rather than male control.

The archaeology of ancient childhood has only recently become a significant research concern, following in the wake of feminist archaeology and a general re-evaluation of the ways in which households and subsistence labour have been examined. The difficulty of investigating children in Ancient Egypt is compounded by a shortage of evidence, long unresolved (Murray, 1956). Childhood mortality is extremely high in prehistoric societies, although estimates are vigorously debated; and range from 10-50% (Parker Pearson, 1999; Kamp, 2001; Graves-Brown, 2010). Szpakowska (2008) points out that infant and child mortality may have been dramatically different in different times and places across ancient Egypt, as it varies widely across even developed nations today. Childbirth-associated deaths of women are even more difficult to assess, and vary widely depending on statistical method.

Subadults and females dead in childbirth should comprise the large majority of any demographically-representative cemetery (Graves-Brown, 2010). Many individuals died in childhood, and most of the survivors themselves died before forty (Szpakowska, 2008). It follows, then, that Macramallah's Rectangle, with its large majority of adult males, is not demographically representative of the Egyptian population as a whole. It is possible that the cemetery is demographically representative of a specialized population of origin.

Prior to the recognition of a child as a gendered or adult being, different burial procedures were followed, particularly house burial under floors and separate cemeteries (Murray, 1956; Parker Pearson, 1999; Rega, 2000; Kamp, 2001; Szpakowska, 2008; Graves-Brown 2010). Settlement burial of infants appears to have been both widespread, and of Egyptian origin, rather than influenced by foreign cultures (Szpakowska, 2008). There is some later, specific evidence for separate burial of children and separate cemeteries for women and children in ancient Egypt (Meskell, 1994; Patch, 2007; Szpakowksa, 2008). Areas in which infant remains have been found include: within settlements close to the walls, close to homes, within the home below floors, in disused homes, near hearths and ovens, as foundation deposits, in shallow graves, in jars, bowls, and amphorae, and in boxes (Szpakowska, 2008). Logic suggests that settlement and near-settlement burials of First Dynasty children will not be accessible to archaeologists, because most of these settlements have been obliterated by ancient and modern construction (Bard, 2000).

Intramural burial of deceased children need not imply a lack of care, or lack of parental attachment; the reverse may be true (Szpakowska, 2008; Graves-Brown, 2010). No sweeping demographic supposition may be made based on absolute numbers within the cemetery. Researchers have pointed out that while rich and elaborate child burials may reflect ascribed status, they may also simply be due to an outwelling of grief at a traumatic death (Parker Pearson, 1999). In fact, Rega (2000) suggested that the most interesting aspect of children buried in adult cemeteries is their presence. It is critical to ask why these *particular* children were buried in an adult- and male-dominated cemetery. Kamp (2001) adds that the archaeologist must also assess whether the subadult individuals interred with adults were actually considered to be children.

If a child had reached a level of maturation and competence that facilitated individual recognition, that child could have been buried as an adult because they were an adult, or at least actively participating in social life (Kamp, 2001; Patch, 2007). In the words of Kamp (2001:26), “We cannot automatically assume that young individuals buried with

weaponry were not, in fact, warriors." Given the very small number of juveniles buried at Macramallah's Rectangle, the definition of Egyptian childhood in this early period is very much a factor for consideration.

Most records of Egyptian childhood are paintings or sculpture from a date long after the First Dynasty. These show that children completed a variety of tasks, divided by gender, which focused on agricultural production, animal husbandry, and the household (Kamp, 2001). Szpakowska (2008) suggests that a child or infant's death may not have been registered officially until the child became part of the labour force. Children were almost always depicted naked with a sidelock, and often wore beads or amulets around the neck (Patch, 2007). There is no evidence of an Egyptian tradition of child sacrifice. No material evidence has been found to indicate that the ancient Egyptians practiced infanticide (Szpakowska, 2008). Juveniles have been found in subsidiary burials near Saqqara mastabas (Emery, 1954), but the sacrificial origins of these subsidiary tombs have not been established.

SIGNIFICANCE OF CEMETERIES TO EARLY EGYPTIANS

Having examined the nature of society and treatment of individuals who would have been interred in a cemetery in the First Dynasty, it is necessary to examine the significance of the cemetery itself. What expectations, needs, and desires did burials and cemeteries facilitate? Ancient Egypt has long been popularly thought of as a culture that revolved around death and exalted the dead above the living (Ikram, 2003). This belief is partly a result of the monumental nature of some Egyptian funerary architecture, partly due to the genuine importance of the topic, and partly due to the paucity of materials from daily life (Wilfong, 2010).

Ancient Egyptian cemeteries served as cultural and emotional touchstones (Taylor, 2001). Royal monuments, in particular, served as a reminder of the eternal nature of the

king and his role in maintaining stability for the land as a whole, as well as reinforcing societal power structures. Basically, the fulfillment of proper rites was an assurance that chaos would not triumph (Taylor, 2001). Evidence from slightly later periods shows that even smaller tombs served an ongoing purpose for individuals and families, as a place for offerings and prayers. For kings, nobles, and the wealthy, the perpetuation of a funerary cult (to varying degrees) was an important priority (Baines and Lacovara, 2002). For the public, a son's duty to construct and maintain a tomb and cult for his parents was one of his most important familial responsibilities (Baines and Lacovara, 2002; Szpakowska, 2008). Cemeteries would likely have figured strongly and actively in a settlement's consciousness, and interactions would have been frequent (Taylor, 2001).

Settlements with long-standing associated cemeteries, such as Naga ed-Der (Lythgoe, 1965; Savage, 2000; Delrue, 2001) demonstrate that early Egyptians did not subscribe to intramural burial for adults. This practice may echo the silhouettes of elite mortuary plateaus (Jeffreys and Tavares, 1994), or reluctance to use arable land for burials, or to have burials within living space. The Egyptians thought of the afterlife as a distinctly separate place, with its own complex relationships; and cemeteries as restricted and protected spaces where the living and the spirits of the dead could interact (Taylor, 2001).

Religious Significance

The various significances of the Egyptian tomb has been the subject of research and debate for longer than almost any other archaeological topic, and the body of research is clearly too large to summarize in this paper. The initial examinations of royal and elite tombs focused on the "tomb as house" interpretation, to which depth and complexity has been added over time (Emery, 1961; Taylor, 2001; Ikram, 2003). Wengrow (2006) specifically articulates that the house that the elite tomb represents is not just a household, but the complex productive unit of which the actual dwelling is a part. The tomb, as the individual's home for the afterlife, was meant to contain everything necessary to replicate their idealized life in the living world in the afterlife, such as

furniture, food, decorations, servants, and agricultural tools (Delrue, 2001; Wengrow, 2006). These provisions could be material (such as ceramic pots full of bread), or depictions intended to magically provide these necessities (Emery, 1961; Taylor, 2001; Ikram, 2003). Mace (1909) stated that vessels were deliberately broken at Early Dynastic Naga ed-Der, either for ritual reasons or to deter theft.

The niched "palace facades" (of possible Mesopotamian origin) of elite mastabas are thought to echo house and temple construction during the Early Dynastic (Emery, 1961). Relationships between tombs echo relationships present during life, so that those relationships will also continue in the afterlife (Baines and Lacovara, 2002). This idea includes elements of service, patronage, protection, and recognition of the divine and separate nature of the king, but focuses primarily on the continuation of current stability and prosperity (Taylor, 2001; Baines and Lacovara, 2002). Cemetery location, tomb location, tomb construction, and tomb contents are all intended to work towards this goal.

The Egyptians held several different belief systems involving aspects of the afterlife. Much of the apparently extensive tomb writings and documentation is formulaic rather than philosophical in nature, and intended to ensure that the individual was provided with the essentials in the afterlife (Baines and Lacovara, 2002). Realistically speaking, funerary cults did not continue forever (Baines and Lacovara, 2002).

From later documents and curse texts, researchers understand that it was important to ancient Egyptians that their tombs remain inviolate (Baines and Lacovara, 2002). The integrity of the deceased's body was considered paramount, as evidence by the myth of Osiris' death and reconstruction; if the body was not intact, the *ba* could not access the offerings left in and by the tomb (Spence, 2010). However, substantial evidence from all periods indicates significant amounts of tomb disturbance and robbery must have

occurred within living memory of the individuals' interment, potentially by people with particular knowledge of the burials (Taylor, 2001; Baines and Lacovara, 2002).

The seeming contradiction of grave desecration and the strong belief in the eternal nature of the tomb is confusing, to say the least (Baines and Lacovara, 2002). Tomb desecration and materials reuse becomes very common during and after the Early Dynastic period, corresponding with the sudden development of extremely large tombs (Baines and Lacovara, 2002). Robbery, especially of high-visibility tombs, was nearly universal (Baines and Lacovara, 2002). Sometimes, goods and materials are re-used to equip later tombs. Even extremely small cemeteries, such as Kafr Ghattati, are almost entirely robbed (Engles 1990). Some authors, like Delrue (2001) are careful to point out that not all artefacts were taken, even in successful robberies he states that ceramics were an unlikely target; Delrue viewed tomb violation as mostly economic in nature.

As previously mentioned, status and display were significant factors in Egyptian tomb planning. Physical separation between the tombs of kings and even their closest elite was distinct during the Early Dynastic period; evidence suggests that rulers' primary tombs were located at Abydos at this time, while the tombs of nobles and officials were at Saqqara (Bard, 2000). The elite at Saqqara clustered along the edge of the cliff, while many of the lesser elite and non-elite individuals were buried across the river at Helwan (Wilkinson, 1996). Many individuals are still missing, based on population estimates, and researchers are not entirely sure that those lowest on the social ladder were actually interred (Murray, 1956; Delrue, 2001). This separation underscored the strongly hierarchal societal organization, and the divine and separate nature of the king.

Cemeteries during the Early Dynastic served both an immediate religious and societal need through body disposal and rituals associated with the afterlife. However, through their locations and constructions, cemeteries also served as reminders to the living

regarding their society, and their own place within it (Taylor, 2001). This would have become particularly true in the First Dynasty with the construction of elite mastabas along the escarpment edge overlooking the new capital. The strong visual impact of these elite tombs should not be underestimated.

The significance of placement of Early Dynastic cemeteries extended to the orientation of cemeteries and individual burials. For the ancient Egyptians, cardinal directions were less important than orientation relative to the flow of the Nile, so areas (such as the Qena bend) with significant changes in the flow of the Nile often have cemetery orientations that do not accord with the compass (Spence, 2010). Generally, people in the Upper Egypt Predynastic were buried with the heads to the south, on their left side, and facing west (Spence, 2010).

Burial orientations shifted in the Protodynastic; corresponding roughly with the development of kingship and the state, burials changed orientations. First Dynasty burials around the capital were usually placed with the head to the north and on the left, so that they faced east rather than west. This change filtered out to provincial areas with relative speed, but not rapidity (Spence, 2010). The patchwork nature of this change can be seen in the mud brick, rectangular, and west-facing Dynasty 0 burials at Kafr Ghattati (Engles, 1990). Spence (2010) theorized that this change in orientation was related to a change in the conception of the dead. With the growth of mortuary cults, buried peoples' spirits were thought of as already in the 'land of the west' (afterlife); and did not need directional help along the way. But to participate in the rituals that would provide for them, the deceased had to face east, so that their living cult would be able to interact with their spirits (Spence, 2010). Later periods often painted eyes on the eastern side of coffins, and constructed structures for cult interaction mostly on the east side of tombs (Spence, 2010). Facing eastwards and receiving offerings may also have been seen as movement towards rebirth, related to the rising of the sun (Spence, 2010).

However, Mace (1909) identified placement of the body on its left side as more critical than which direction the burial faced.

EXPECTATIONS: ELITE CEMETERIES

In the capital region, and at critical religious centres like Abydos, royal and elite individuals existed in relatively high numbers, and were generally buried in separate cemeteries during the First Dynasty. These cemeteries consist of physically imposing individual mastabas and their surroundings. Although monuments are often constructed with reference to the highest-ranked individual's tomb, they are not always clearly related to each other, but each construction affected subsequent monuments (Swelim, 1991). Elite mastabas are usually located on higher elevations and in highly visible locations requiring significant effort to reach (Wilkinson, 1996).

The location of the First Dynasty royal tombs has long been a subject for debate, as similar structures exist at Saqqara and Abydos, as well as a few scattered memorials in other locations (Wilkinson, 1999). Researchers now generally believe that the tombs at Abydos were the actual burial places, while those at Saqqara functioned as memorials or cenotaphs, surrounded by tombs of nobles (Wilkinson, 1999; Bard, 2000). There are large and elaborate Early Dynastic tombs at other sites throughout Egypt; it is difficult to determine exactly how these individuals might be linked to power structures closer to the capital, and the tombs often exhibit provincial variation and are more difficult to date with precision (Wilkinson, 1996; Delrue, 2001).

Tomb size is a relatively standardized means of status assessment for archaeologists working with Early Egyptian materials (Wilkinson, 1996). However, a number of authors have identified a long-standing trend for larger and likely wealthier tombs to be located on higher elevations, regardless of period and location. Larger and higher status tombs are located farther up hillsides in the Early Dynastic at Tarkhan, at a variety of Memphis

area sites, and in the Middle Kingdom at Hagara (Jeffreys and Tavares, 1994; Ellis, 1996; Szpakowska, 2008). Early Dynastic tombs in general are often located up hillsides at sites such as Naga ed-Der, and competition for prime visibility seems to have led to the establishment of new elite cemeteries in the First Dynasty (Jeffreys and Tavares, 1994; Wilkinson, 1996). However, although the larger tombs at Helwan are easily identifiable, many of them are from the Second Dynasty rather than the First (Wilkinson, 1996).

The Early Dynastic was a period of experimentation in elite-tomb building (Reisner, 1936; Engels, 1990). There are common trends, but each tomb is unique. The nobles' and officials' tombs are often more similar than the rulers'. In the First Dynasty, the burial chamber in an elite tomb was still underground, and often had accompanying subterranean chambers (Emery, 1938). Actual burials took place within a wooden shrine within the burial chamber (Reisner, 1936; Bard, 2000). Tombs of this magnitude were dug into underlying bedrock. Above this structure was sometimes a palace-façade (niched) mastaba or mounded superstructure, originally with a funerary stele of the tomb owner, and sometimes containing storage magazines. These superstructures were generally rectangular, often with slightly angled walls; and generally constructed on a platform. Some had what Emery (1938) referred to as a 'fender wall' around the superstructure.

Tombs belonging to more powerful individuals were often surrounded by subsidiary tombs. Access stairways in addition to ramps to the burial chamber appeared in the reign of King Den; these were often blocked with stones like portcullises (Emery, 1938; Engels, 1990). Typical large tombs of this time had a staircase to a single or multiple chamber, all brick-lined (Wilkinson 1996). The advent of the staircase meant that a tomb could be built during the lifetime of its intended occupant, rather than at the point of their death (Bard, 2000); during and after the reign of Den, all of the events within a tomb may no longer be assumed concurrent.

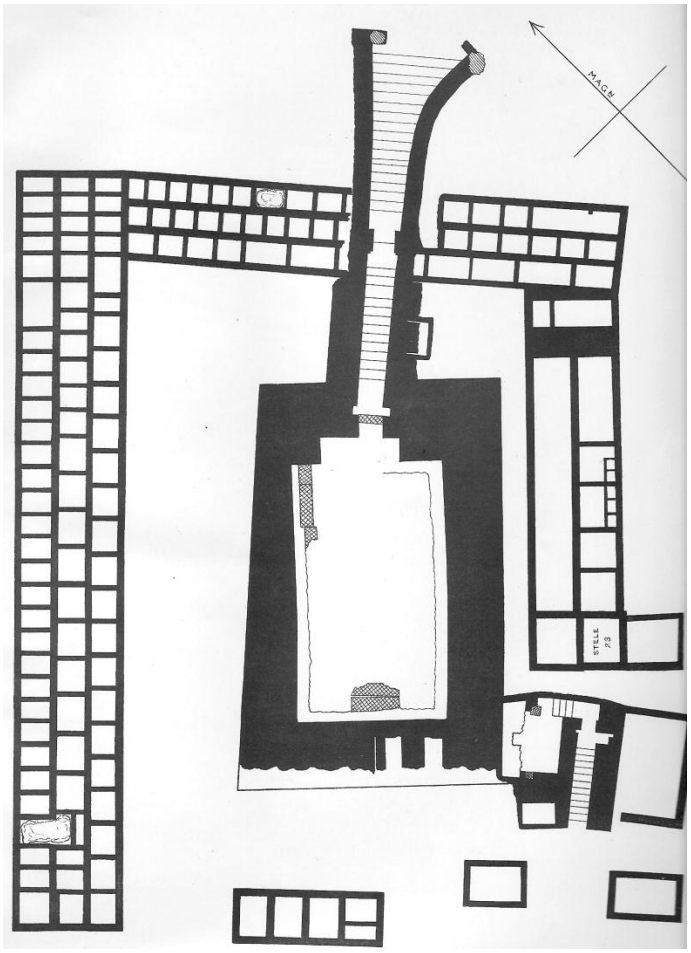
Elite tombs were normally built of mud brick during the First Dynasty, but royal tombs began to use stone. Walls and ceilings were often plastered and painted (Emery, 1938). Den's tomb was floored in granite, which is the first known use of this stone in construction (Petrie, 1901; Bard, 2000). However, stone facades do not occur until much later. Mud brick is visible on geophysical surveys, but the density of discarded mud brick at sites like Saqqara has caused problems for researchers trying to identify tombs from early periods (Mattieson and Dittmer, 2007), although Baka (2011) suggested that dense rubble might result from buried tombs at Saqqara. Later rulers seems to have shown respect to First Dynasty sites by not building over them, but this eroded over time, and many of the less substantial constructions were built over or cannibalized for building materials (Baines and Lacovara, 2002).

Subsidiary tombs were generally organized in tidy lines at close to right angles around all four sides of the main tomb, often leaving an access opening to the SW (Petrie, 1901; Bard, 2000). Alternatively, entrances often faced cultivated areas (Bard, 2000). The presence of constructions preventing easy access to any given tomb, or the central tomb, is similar to the 'closed' architectural form noted by Roth (1993) inside elite tombs, with many passageways and turns to access niches and chambers. Roth commented that elite cemetery construction as a whole paralleled house construction closely during this period by restricting access.

Tombs beside mastabas were often constructed in a trench, with connecting and shared walls, which has led some researchers to believe that these individuals were sacrificed and buried simultaneously, which will be examined in more detail later (Petrie, 1922). Trench construction became popular in the third reign of DI, and continued through Den's reign. Other burials could be placed around the primary rectangle, or in rows or blocks further away, which might be constructed more independently (Reisner, 1936). Reisner (1936) also notes that subsidiary burials retain an unelaborated architectural type, and do not include innovations such as the staircase. Not all of the rooms created

using this construction method were used for subsidiary burial; many appear to have been storerooms as well, which frequently contained large numbers of storage jars (Petrie, 1900). Burials in subsidiary tombs are often, in their contracted position, pointed towards the central tomb, rather than facing east for the receipt of offerings (Reisner, 1936). For an example of an elite First Dynasty tomb, see Figure 2-1 below.

Figure 2-1: Tomb of King Den at Abydos



After Petrie (1901)

Many of the First Dynasty royalty also had a structure known as a 'funerary enclosure,' or *Talbezirke* (Kaiser, 1985). These enclosures, many of which were initially excavated by Petrie (1925) at Abydos, consist of lines of tombs around a central space. They are located distantly from the royal mastaba complex. The construction of these enclosures

is very similar to the subsidiary tombs around royal tombs. Although the lines appear to have followed a fairly strict linear format, some graves are larger, in second rows, or slightly crooked; walls appear to have been built independently of each other (Petrie, 1925). However, the graves are also extremely close to each other, sometimes sharing walls. Most of these groups of tombs display only a couple of rows, and their alignment, while imperfect, is substantially more regular than Macramallah's Rectangle (Macramallah, 1940).

Funerary enclosures are sometimes thought to be a precursor to later valley temples, and are generally located closer to cultivation. The purpose of these structures remains obscure, but they are generally related to the funeral rites of the king (Morris, 2008). Kaiser (1985) specifically suggested that the funerary enclosure could have been used for ceremonies associated with embalming. Several of these enclosures exist at Saqqara, but most are later in date (Swelim, 1991).

The construction of trench-form subsidiary burials during the First Dynasty has led many researchers to believe that the ancient Egyptians practiced human sacrifice, particularly associated with the king's court and establishment of the state. Evidence for human sacrifice is associated with the late Predynastic/Early Dynastic transition, and perhaps occurred throughout DI. If sacrifice did occur, it ended before the Old Kingdom period, and there is almost no textual record from later histories of the establishment of Egypt (Reisner, 1936; Crubézy and Midant-Reynes, 2000), and none describing a sacrificial ritual.

The Protodynastic through First Dynasty period encompassed the transition to a unified state. The reforms to Egyptian power structures identified the king as both ruler and god; he was divine, and his powers extended to life and death (Wilkinson, 1999; Taylor, 2001). This viewpoint is typical of periods in which human sacrifice occurs cross-

culturally; sacrifice is often associated with early state formation and periods of consolidation in heavily ranked societies (Hoffman, 1980, Albert et al., 2000; Crubézy and Midant-Reynes, 2000). Sacrifice during state consolidation is often thought to function as public confirmation of the intended order of the world.

Sacrificial behaviour has many different meanings. It is a concept associated with many different archaeological expressions; when the object of sacrifice is human life, the archaeological evidence is slightly more predictable, but still cannot demonstrate the entirety of the actions associated with sacrifice (Albert et al., 2000). When sacrifice occurs in a consistent format, it is more likely that researchers will be able to identify occurrences. Albert et al. (2000) identified six archaeological variables whose combination made it likely sacrifice had occurred. These are: traces of violent death, multiple burials, hierarchal disposition of bodies, placement with or in a place of offerings, placement in sacred space, and a selection bias in determining the placement site. Judd and Irish (2009) stated that more likely courtier sacrifices would share genetic and cultural affinities with the king, and exhibit rates of trauma no higher than the average. Their criteria were designed to eliminate the possibility of sacrifices of prisoners of war. With suitable parallels occurring within a culture, sites of body disposal meeting several of these criteria could be considered in the light of human sacrifice.

Competition for status between individuals and families may be intense in any situation, but particularly when there are opportunities for significant advancement. The First Dynasty, and the reforms of King Den, seems to have provided such opportunities in abundance (Wilkinson, 1996; Wilkinson, 1999). In this situation, sacrifices may act as a display of power and resources, in the same way that any other large-scale event might do (Morris, 2008). Human sacrifices could be interpreted as a grave good, another way in which to reconstruct the king's household to accompany him into the afterlife. Reisner (1936) suggested that the subsidiary burials might have been court officials, royal family members, and potentially members of the king's harem. Kemp (1967) suggested instead

that most of these individuals at Saqqara would have been artisans, often buried with the tools of their trade. In any case, disposal was not intended to render these individuals as nameless as some are today; many had stelaes or painted walls giving their name (Petrie, 1900). Therefore, if these individuals were sacrificed, their identity, and likely position, was an important contributing factor in that decision.

Equally, deaths of powerful and charismatic individuals can be crisis points, especially in the midst of social upheaval. The divine nature of the Egyptian kings included ensuring stability, and sacrifices may have served as a guarantor (Albert et al., 2000; Morris, 2008). The importance of stability and predictability to ancient Egyptians, in particular the king's role in maintaining stability in the Nile Valley, lends this last point additional resonance (Campagno, 2000). However, it is almost impossible to clearly segregate these motives (Albert et al., 2000). Likely, a variety of motivations and purposes functioned in concert.

Work associated with the Adaima project has suggested that Predynastic human sacrifice rituals involved bloodletting and mutilations, in a few cases with multiple interments (Albert et al. 1996). Suggested methods of death have included beheading at Hierakonpolis, beheading and throat slitting at Adaima (Ludes and Crubézy, 2000), strangulation (Galvin, 2005), burial after a stunning blow (Petrie, 1922), and poison (Emery, 1954). Judd and Irish (2009) recently conducted a very detailed investigation applying palaeopathological methods to potentially sacrificed individuals, which focused on group affinity and evidence of trauma. Given the lost, stolen, or mislabeled condition of most First Dynasty skeletal material, the potential for this level of research at most site in early Egypt has been lost forever. Finally, not all researchers believe that the skeletal markers used by these researchers indicate sacrifice; for example, Wengrow (2006) suggests that Predynastic burials may have involved dismemberment, but not sacrifice.

The theory of sacrificed retainers is extremely difficult to prove. Forms of evidence previously used by researchers have included stratigraphy, burial position, and palaeopathological arguments (Galvin, 2005; Judd and Irish, 2009). An strong example in the tomb of Hor-Aha; his very early First Dynasty tomb appears to include the remains of several individuals sealed in with the closure of the tomb, which strongly argues for simultaneous burial (Emery, 1939; Galvin, 2005). However, the mid-DI appears of trenched subsidiary burials makes in more difficult to directly assess the temporal relationship between the royal individual and their accompanying burials. The number and size of subsidiary burials decreases through time, which suggests a shift in attitude (Reisner, 1936; Morris, 2008). Although Petrie (1925) observed similar grave goods at the Tombs of the Courtiers and other subsidiary burials, including those around mastabas, there was no unique assemblage for subsidiary burial. Some of the artefacts deposited in subsidiary burials may have been related to occupation, such as paints or large quantities of pots (Emery, 1954), but others were likely personal. It is likely that both the individuals' households and the supervising authority were responsible for the disposition of each subsidiary tomb.

In the case of First Dynasty royal tombs, which are generally large and complex, site construction and stratigraphy has also been used as an indicator of sacrifice. The emphasis placed on the order of ceremonies can be traced to Reisner (1936), who stated that subsidiary burials could have been planned and prepared in advance of their usage; unless the royal tomb and its subsidiary burials were sealed at the same time, one could not simply assume that burial had been simultaneous. In later reigns of the First Dynasty, such as Den's, subsidiary burials and sacrifices may have occurred together (Reisner, 1936; Crubézy and Midant-Reynes, 2000).

Proposed sacrificial burials from First Dynasty contexts have been male-dominated (Aha, Dreyer, 1992), and female-dominated (Zer, Reisner, 1936; Hor-Aha, Emery, 1939). This contrast has made it difficult to assess the implications of sacrifice. In a search for

common factors, Crubézy and Midant-Reynes (2000) have argued that sacrificed individuals are often relatively young, and accompanied by animal remains. Unfortunately, most excavation records lack detailed descriptions of the remains of individuals from subsidiary burials, and the skeletal material has often gone uncurated. For example, Petrie (1925) took a selection of skulls from the Tombs of the Courtiers, dipped them in paraffin, and brought them to London. But the long bones were re-buried in a Second Dynasty fort. Using modern palaeopathological methods, it might have been possible to determine if these individuals were sacrificed based on skeletal markers; without such data, it is not possible to conduct the type of multi-pronged examination exemplified by Judd and Irish's (2009) examination of Nubian sacrificial practises.

The other, and less incendiary, contents of the highly visible elite tombs have usually been completely destroyed, but seem to have been rich, with a body (likely wrapped in cloth and in a coffin, probably in a semi-extended to extended position), perhaps some ornaments, furniture, weapons, tools of daily life, and extensive food provisions; some of the food may have been presented on a stone offering table (Taylor, 2001). One of the most extensively recorded non-royal tombs, that of Den's second Chancellor, Hemaka, provides a valuable artifact comparison for many of the other First Dynasty cemeteries in Egypt. His burial goods function as exemplars of a variety of different artifact types (Emery, 1938).

Macramallah (1940) used Hemaka's tomb as a basis for comparison; examples of grave contents from Hemaka's tomb include: hundreds of wine jars and sealings, ox bones, ceramic eating services, tools and handles for adzes and sickles (which he almost certainly did not use himself), inlay and labels in ivory and wood, discs of raw materials, several hundred arrows, flint blades and scrapers, coils of rope, and gaming pieces (Emery, 1938). Clearly, the tomb contents were in excess of what Hemaka would have had the expertise to use himself, with the expectation that servants or family members

would also help in establish the household. Den's own tomb contained remnants of very similar materials (Petrie, 1901; Bard, 2000). Although Macramallah compared many of the materials he found to those in Hemaka's tomb, the lack of consistent descriptors for exact comparison illustrates an ongoing problem in Egyptian archaeology (Reisner, 1931).

A few types of grave goods warrant specific mention. Elite individuals, particularly the early kings of Egypt, were often buried with either animal remains (often in the form of joints of meat) or whole animals. For example, Aha, likely the first king of the First Dynasty, was buried near the remains of at least seven young lions (Bard, 2000). Dogs were also often buried near kings (Bard, 2000). Whole animal burials, particularly large animals, appear to be largely associated with the elite. First Dynasty kings and elite officials at Saqqara, as well as some officials at Helwan are interred with one or more boat pits nearby, the extent of which is still being discovered (Wilkinson, 1996; Bard, 2000). Boats were likely either symbolically or actually part of funeral processions, or also intended as a transport mechanism in the afterlife but there is room for speculation (Wilkinson, 1996). Ward (2006) noted that parts of boats were routinely recycled. Because a single boat represented significant power to trade locally and abroad, as well as the ability to transport large numbers of people, Ward argued that boat burials made a strong statement of power on behalf of the deceased and those who buried him, nearly as significant as the tomb construction itself.

Finally, several kings were interred with dwarfs (Petrie, 1900). Dwarfs often held respected positions at court, and were frequently interred with early kings (Kozma, 2006). The Egyptians appear to have held dwarfs in some esteem, and associated mainly achondroplastic dwarfisms with the gods Ptah and Bes, rather than any negative or medical interpretation (Kozma, 2006). Some seem to have held specialized occupations, including jewellery making (Kozma, 2006). It is not clear how the inclusion of dwarfs in king's burials may relate to sacrificial intentions, or whether these dwarf burials would have been perceived as subsidiary burials.

EXPECTATIONS: PUBLIC CEMETERIES

As previously mentioned, the ancient Egyptians seem to have broken their society into two primary classes, elite and public (Grajetzki, 2010). However, evidence from both the Early Dynastic and later periods strongly supports the existence of what some researchers consider a 'middle class.' Macramallah (1940) considered the cemetery he excavated to fall into this category, and titled his report accordingly. Others have also remarked on the burials of relatively wealthy non elites, as well as specialized craftspeople. Wilkinson (1996) suggested that the non-elite sections of Helwan contained minor officials and maybe the public, implying a distinction between the two. Based on the overall economic structure of ancient Egypt, it is likely that individuals in this category would have held an association with a particular elite individual or estate. For example, the king's household would have held craftspeople. Specialized industries, and elite support thereof, are one of the hallmarks of the system which developed during the Early Dynastic period. Much of this industry appears to have produced materials for royal funerals (Bard, 2000).

Many researchers believe that subsidiary burials contain craftspeople who owed allegiance to the elite around whom they were buried, replicating the power structures that determined their relationship during life (Morris, 2008). However, other than established subsidiary burials, there is very little evidence to be found of the middling sorts of people in Egypt of this period (Bard, 2000). While defining the elite is relatively intuitive, the boundary between comfortable establishment and not-absolute poverty is rendered extremely difficult by the paucity of settlement evidence for the First Dynasty. Researchers are extremely aware that a properly provisioned burial was important to ancient Egyptians; how much would a household have been willing to sacrifice to ensure that this happened?

The only certainty is that thousands of Egyptian burials are missing (Murray, 1956). Various theories of non-interment disposal have been proposed for individuals on the

lowest end of the Egyptian socio-economic spectrum (Murray, 1956). More recent advances in satellite imagery may add settlements and cemeteries to the Egyptological knowledge base as well.

Some cemeteries seem to have contained individuals falling into non-elite group. Unfortunately, there is little record of the extensive non-elite burials from Helwan (Saad, 1969; Wilkinson, 1996). Equally, many of the other excavated First Dynasty cemeteries were either extensively robbed; or were excavated early in the twentieth century and insufficiently recorded for present purposes. Other cemeteries, such as the Early Dynastic tombs of Naga ed-Der, are from provincial locations, where materials and trends may not be directly comparable to those close to the capital region. Some, like Kafr Ghattati (Engles 1990), are very small, and include limited socio-economic strata.

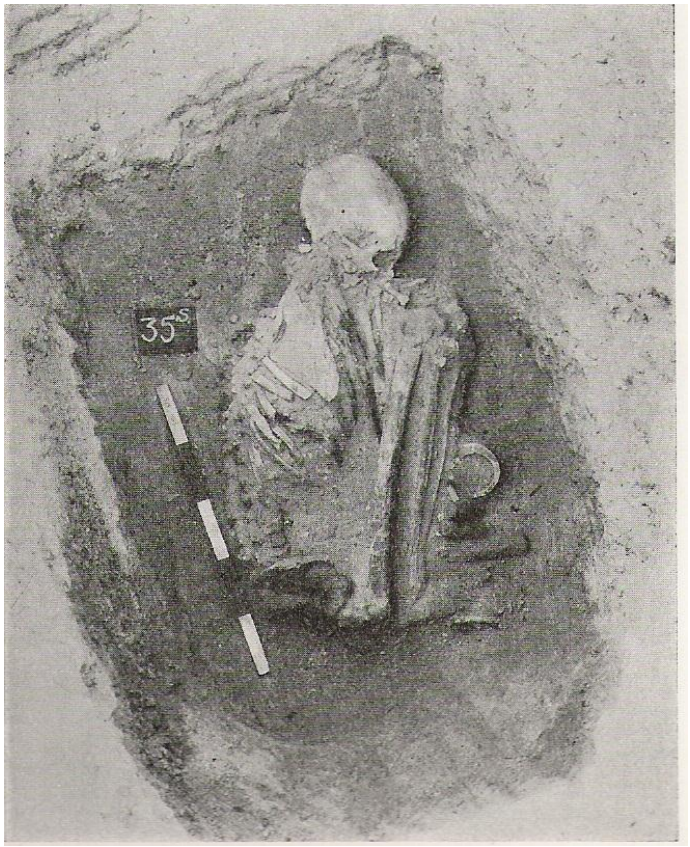
What is known of middle status burials during this time is that they are comparatively simple. Most are simple rectangular pits, sometimes with rounded corners. The pits may feature mud brick lining, or evidence of wooden floors or ceilings (Reisner, 1936; Wilkinson, 1996). Occasionally, pits are subdivided or feature small additional rooms, although these are usually associated with the largest tombs. Without additional architectural features, simple pit tombs are very difficult to date (Mace, 1909; Wilkinson, 1996). Many authors believe that a small above-ground offering place, a pre-cursor to the chapel, was present all but the poorest of tombs (Taylor, 2001). Macramallah (1940) theorized that the stepped format of tomb Type D (one example) could have been linked to an offering place.

Some large non-elite tombs have access, ramps, or stairways from the reign of Den onward, or mounded superstructures (Mace, 1909). The range of tomb sizes expected of elite versus middling tombs is unclear, although Reisner (1936) suggested that tomb floor areas over 3 m^2 could be considered elite, while Ellis (1992) used a volume of 2.5

m^3 as a marker of large volume. Reisner (1936:43) admitted that this was an almost entirely arbitrary measure. Ellis lists no specific rationale for his marker. Likely, elite tomb size is dependent on the size of other tombs in the cemetery and the overall location.

Like elite tombs, middling tombs of the First Dynasty were almost universally intended for single occupancy; the majority of these were likely male, as previously discussed. The deceased would typically have been wrapped in fabric, and likely placed in a coffin. Lacking a large coffin, the individual would have been placed in a contracted position (Reisner, 1936; Saad, 1969; Taylor, 2001). Likely, they would have been placed lying with their head to the north, lying on their left side, facing east (Spence, 2010). Figure 2-2, below, demonstrates a relatively typical burial for the First Dynasty public.

Figure 2-2: A Typical Public First Dynasty Burial



After Macramallah (1940: Plate XII, T35)

The tomb of a middle status person in this situation would likely have contained ceramic pots, mostly for food. These would mostly have taken the form of cylinder vessels and storage jars, of several different subtypes. Bread and grains were mainstay tomb items, sometimes accompanied by model granaries (Wilkinson, 1999; Wengrow, 2006). Additionally, the tomb might have contained personal ornaments (beads, hairpins, or similar) or stone vessels. The stone vessels would likely have been comprised mostly of softer stone, such as alabaster . A few tombs of this type would have contained ivory pieces, flint blades, or copper artefacts. By the reign of Den, palettes were deposited in tombs around the capital with less frequency (Emery, 1954; Ellis, 1996); but finds of foreign ceramic wares are higher during Den's reign than any other time in the First Dynasty (Wilkinson, 1999). Grave goods were not necessarily obtained new, or reserved solely for funerary purposes (Mace, 1909).

First Dynasty non-elite tombs of some wealth are generally placed in small groups, often on hilltops or hillsides. At Tarkhan, the higher status burials were in groups located at higher elevations (Ellis, 1996), which is a trend that continues through at least the Middle Kingdom (Szpakowska, 2008). It is often thought that burials occurred in family groups; but name markers are rarer amongst the non-elite, and without such inscriptions, family relationships remain somewhat obscure. Very large non-elite cemeteries like south and central Helwan (Wilkinson, 1996) still exhibit tomb grouping by size (and approximate status), even when there are almost no high-status tombs present.

Non-elite tombs of no wealth, however, are even less readily located than their better-off counterparts. For a great expanse of the time, Egyptologists were not really interested in common graves of the post-Predynastic era, focussing almost entirely on the tombs of kings and those associated with them. Although a large portion of these missing tombs must surely be owed to the usual attrition of archaeological processes,

the rarity of poor graves has led some to theorize that the poorest in ancient Egypt were not buried at all. Murray (1956) suggested that the poor may have been exposed in the desert or agricultural fields, or perhaps thrown into the Nile for crocodiles to consume. However, Murray's argument does not account for the potentially dangerous health consequences of exposing human bodies near food crops, or accustoming crocodiles to feeding. Nor does it address the religious implications of this type of disposal when the wholeness of the body was, theoretically at least, considered paramount (Baines and Lacovara, 2002). Mace (1909) pointed out that no large bone deposits have been found.

It is possible that intact tombs without grave goods, or with very few grave goods, are the burial places of those individuals whose household lacked resources other than basic labour for simple tomb construction. At Macramallah's Rectangle (Macramallah, 1940), as well as at Helwan (Saad, 1969) and Tarkhan (Petrie, 1914), the characteristics of the poorest tombs echoed characteristics typical of Predynastic burials. Examples include more rounded and circular tombs as well as bodies wrapped in reed mats or leather bags, rather than the coffins typical of later periods and richer burials (Macramallah, 1940; Bard, 2002). These characteristics began to change amongst the elite before state formation (Bard, 1994).

Some authors suggest that the reorganizations and development of the First Dynasty would have taken a great deal of time to trickle down to the outskirts of the nation, and potentially also to the poor (Wilkinson, 1996). Reisner (1936) suggests that burial trends were moved quickly to provincial areas, but only to the tombs of the elite. The poorer the tomb, the more difficult it is to date, and Wilkinson (1996) points out that differences between cemeteries as close as Tarkhan and Helwan may be sufficient to distort tomb dating by a king or two.

CONCLUSION

Although the gap between the elite of First Dynasty Egypt and the rest of the populace was extreme, there are commonalities between these apparently disparate grave types that speak of similar desires and beliefs regarding their dead. In the midst of the governmental and hierarchal reforms of the early state, the Egyptians maintained continuity with their past on an individual and group level, and the treatment of the dead was one of the most important means by which this connection was continued. At the elite levels, and trickling down to the less elite, additional motivations began to impact choices made regarding disposal of the dead. However, the underpinning sense of responsibility of individuals on behalf of their deceased relatives appears to be a constant.

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Chapter Three: Sex and Age at Macramallah's Rectangle

INTRODUCTION

Macramallah's Rectangle is an unusual non-elite First Dynasty Egyptian cemetery, located on the Saqqara Plateau, but north of most of the mastabas and tomb constructions of the ancient population of Memphis. It was excavated by Rizkallah Macramallah (1940). The cemetery consists of six groups of tombs dating to the reign of King Den (mid First Dynasty), totalling 231 graves, 228 of which are included in this study. A sizeable portion of the tombs are intact, which is atypical of large cemeteries of this period. The combination of the unusual location of Macramallah's Rectangle, its large size, and its relatively intact nature make it imperative to incorporate this cemetery into the body of archaeological knowledge, regardless of the difficulties inherent in so doing. While many studies have previously examined the purpose of Macramallah's Rectangle (Kaiser, 1985; Morris, 2008; Baka, 2011), none thus far have conducted a detailed analysis of the sex and age characteristics of the cemetery. The sex imbalance identified in the first site report has been highlighted as supporting evidence for a variety of interpretations of the cemetery (Morris, 2008). Detailed examination of this material in an intra- and inter-cemetery context is an illuminating reflection on these interpretations.

The burial groups in Macramallah's Rectangle constitute both a convenient and a logical primary unit of analysis. Their physical representation is clearly intentional, and therefore each unit represents, to some extent, a group of individuals who were deliberately affiliated with each other in death, as perhaps they were affiliated with each other in life. For the first part of the sex and age analysis of Macramallah's Rectangle, this paper will examine the characteristics of sex and age affiliated tombs within burial groups. These results will be used to construct relationships between the sex and age affiliations of individuals buried in the same groups. Later, these relationships will be examined between tomb groups in order to construct an appropriate model for sex and age relations within the cemetery as a whole.

CONTEXT

Anthropologists have elaborated at length on the distinction or continuum between sex and gender (Arnold, 2007), and the importance of accessing the intersect of these concepts in anthropology and archaeology. However, the fuzzy refinement of this data set, lack of corresponding written documentation, and inability to re-access the materials render it difficult to analyze gender presentation in Macramallah's Rectangle. Without an exceptional burial highlighting an apparent irregularity in the results, gender remains unfortunately inaccessible. It is far better to access sex determination and use these data, imperfect though they may be, to investigate the large majority of individuals, than it would be to stereotype narrow roles and ascribe outliers without much stronger information (Arnold, 2007; Kamp, 2001).

It is entirely possibly that such narrow roles did not exist; much research suggests that both males and females in Ancient Egypt fulfilled a variety of economic and social roles, many of which left few archaeological traces at Macramallah's Rectangle (Savage, 2000; Szpakowska, 2008; Graves-Brown, 2010). Most studies on gender in the Near East focus on textual and image evidence rather than on mortuary data (Arnold, 2007). Mortuary data are particularly useful because gender systems are consciously or unconsciously reproduced in body disposal (Arnold, 2007).

Although females experienced greater legal equality in the later Egyptian kingdom than in many other societies, much less is known about the legal implications of age and sex during the Early Dynastic period. It is known that the late Predynastic and Early Dynastic periods involved an intense growth of hierarchy and bureaucracy in Ancient Egypt (Bard, 1994). This was especially true during the reign of King Den. His reign was long, stable, and prosperous, and involved a singularly large expansion of the business arm of the kingdom (Wilkinson, 1999). There are many theories of how hierarchism affected the status of sex and age groups in Ancient Egypt (Savage, 2000). and how this was expressed in tombs (Ellis, 1996), but it is generally agreed that the real status of females,

in particular, decreased throughout most of the transition from the Predynastic to the Old Kingdom (Graves-Brown, 2010).

Most attributed tombs in Ancient Egypt belong to males; the percentage varies by location and period, but is quite consistent (Robins, 1993). Theories regarding this imbalance will be examined below. However, it is apparent that for the purposes of a sex/age analysis, the "average" grave standard is that of an adult male. That is to say, there are no features that specifically identify graves of adult males separately from what is known of the majority of graves in any given period, and therefore it is not necessary to elaborate at length on what is typical of tombs of this period in this paper, as it has been examined at length elsewhere. Evidence suggests that as the individuals at Macramallah's Rectangle were definitely not high officials, their burial and funerary goods would have been obtained by the family, likely at least partially from household goods (Delrue, 2001).

It appears that throughout most of Egyptian history, the rituals and mortuary treatment associated with deceased males and females were substantively similar (Robins, 1993). In later periods, family tombs associated with a male with his wife and unmarried children became the norm (Robins, 1993). However, in earlier periods individual burials were normal, although family groups may have been located near each other (Savage, 2000). In the Predynastic, females' tombs were often large and rich; grave goods may have included more ornaments and fewer weapons, but there is not a lot of evidence for significant sex-based status differences (Savage, 2000; Graves-Brown, 2010). Hassan and Smith (2000) conducted a detailed study of sex-specific correlations with grave goods in Predynastic Egypt, but there is no Early Dynastic equivalent. Unusually, this study also attempted to isolate iconography and colours associated with males and females.

However, by the NIII periods (approximately equivalent to the First Dynasty), male graves outpace female graves in terms of wealth and apparent status (Graves-Brown, 2010).

Some authors state that royal females who held power in the First Dynasty and Old Kingdom were buried with the same elaborate ritual, architecture, and artefacts as elite males (Graves-Brown, 2010). However, it could be argued that the small number of these females as opposed to those who received subsidiary smaller tombs or fewer accompanying tombs indicates the rarity of high status women. In a demographically normal cemetery, there should be slightly more female graves than male (Arnold, 2007).

Additionally, it has been suggested that Den's mother Merneith (likely regent to Den in his childhood) appears in lists after his name as a matter of status and role, rather than actual chronology (Kahl, 2006). As regent, Merneith likely held significant personal power. However, on a micro level, any given female grave would likely, in the First Dynasty, be only slightly smaller and poorer than the male burial located nearby. There is evidence for sex-based differences in expressions of status in Early Dynastic cemeteries (Ellis, 1992), but many graves do not appear to contain specific markers of gender; these "neutral" graves are often ignored in mortuary analyses of gender (Arnold, 2007).

Funerary treatment of children in ancient Egypt appears to have been more fluid than treatment of older individuals. Very young children often seem to have been buried intramurally (Meskell, 1994; Szpakowska, 2000; Graves-Brown, 2010), or in separate cemeteries or areas of concentration (Meskell, 1994; Patch, 2007; Graves-Brown, 2010). In addition, although adulthood generally appears to have been linked to puberty, the small number of children in Macramallah's Rectangle may have been economically contributing in some way at the time of their death, as no juvenile was assessed as younger than seven or eight years old (Macramallah 1940); and the rituals associated with adulthood, such as cutting the forelock, would not be visible in skeletal material (Kamp, 2001).

Juvenile graves are not expected to contain unique goods marking their status, although in later periods some elite tombs contain explicit reference to childhood (such as that of Tutankhamen). Some excavators of much later Egyptian sites, including Meskell (1994) at Deir el-Medina, note that juveniles generally tended to receive less ostentatious burials. Rega (2000) suggested that a reluctance to include high-utility goods in juvenile burials may be owed to an adult's need for them; such may also be true of high-status ornamental items. High-value goods in juvenile tombs are generally thought related to some variety of ascribed status, although outpouring of grief at tragedy may also be a cause (Pearson, 1999). Finally, some authors, in particular Murray (1956) have argued that the poorest commoners would not have been buried, but exposed or put into the river. In this case, all of the buried individuals archaeologists have found would have to be seen as at least a step above impoverishment. However, there is no direct evidence of this practise (Delrue, 2001)

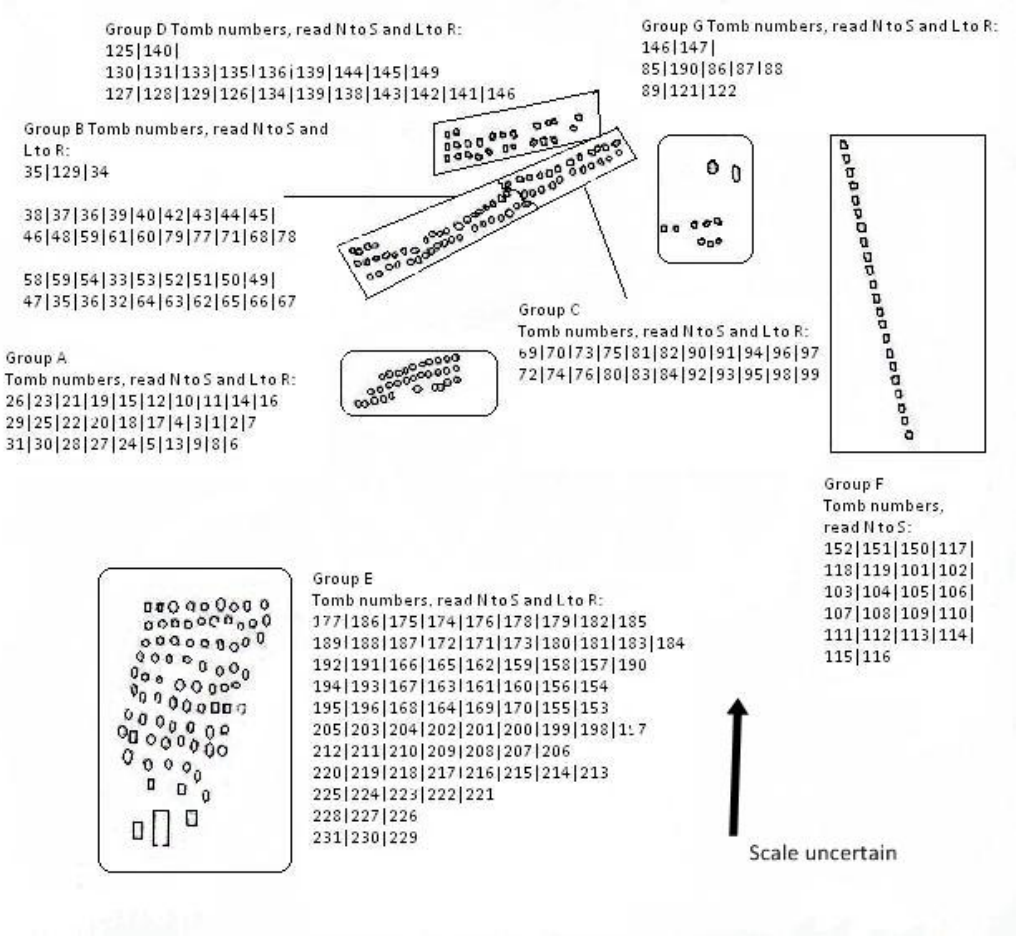
MATERIALS

Three of the 231 tombs could not be used in analysis, because their locations could not be isolated based on Macramallah's tomb register and map. While some researchers, including Kaiser (1985) and Morris (2008) incorporate these tombs into different tomb groups, it is more parsimonious to exclude them from analysis. Two hundred and twenty-eight tombs have been incorporated into the present analysis; not all of these contained recoverable skeletal material. Group E, in particular, was heavily destroyed during robbery of the tombs, and often, Macramallah was only able to indicate whether or not an adult was interred in a given grave. In most other cases, each tomb contained one individual, with some associated grave goods. Analysis incorporated the architecture and spatial location of the grave, the identifiable skeletal characteristics, position, and treatment of the body, and the artefacts contained within each tomb.

While some grave groups were disproportionately affected by tomb violation and robbery, age and sex information is accessible for a large proportion of the cemetery's

inhabitants. Exceptions include Group E, which is both apparently almost entirely male, and also almost entirely robbed. This information has been incorporated and analyzed by tomb group to the extent allowed by the data. As a reminder of the cemetery configuration, please see Figure 3-1 below.

Figure 3-1: Macramallah's Rectangle



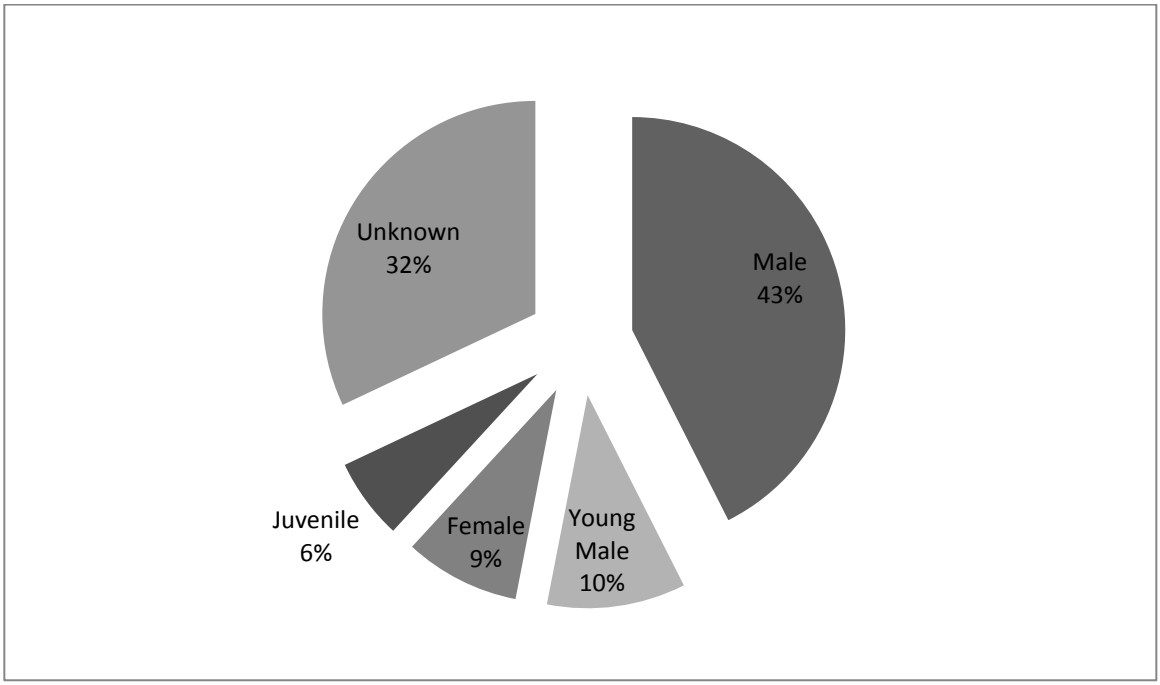
After Macramallah (1940)

METHODS AND PROCEDURES

All skeletal sex identifications, with one exception noted below, were accepted as listed by Macramallah, as there are no comparative reports available. Macramallah does not specify the methods used to determine sex of the skeletal material, and therefore, particularly given the period of the excavation, sex identifications must be viewed with the understanding that there is likely a sizeable margin of error in the data, with a bias towards identification of adult males (Weiss, 1972; Graves-Brown, 2010). Derry's (1940)

report on the skeletal material consists entirely of skull measurement-based racial assessments, rather than discussing pathologies. As the skeletons themselves cannot be found, there is at this time no possibility of re-evaluating the finds for modern skeletal biographies as Podzorski (1990) did for Predynastic Cemetery 7000 at Naga ed-Der. Individuals were given the following designations: M (male); F (Female); Y (Young Male); J (Juvenile); U (Undetermined); and P (Probable) where noted. The term 'probable' was rarely used by Macramallah, and these individuals were subsumed under the broader category of identified sex for analytical purposes in this study. However, there were a sizeable proportion of unsexable individuals, probably due to tomb violation (see Figure 3-2 below).

Figure 3-2: Age/Sex Proportions at Macramallah's Rectangle



The category of young male was used because it represented a relatively large (N=24) and specifically identified population given as young males age 16-20. In fact, this group outnumbered the identified juveniles as well as females. Given the difficulty of securely identifying sex at this life stage, and the methods in use at the time of excavation, the decision was made to separate these individuals in order to determine if their identification was correct. These individuals may have simply represented very slight males, or more than usually robust females of a younger age. In addition, assuming that

all were correctly identified, the size of the group made it feasible to attempt to reconstruct their social position relative to others in the cemetery; and thus shed light upon the influence of age and inheritance on individual status, or possibly indicate whether common age group markers were used.

In one case, a juvenile individual was assigned a sex by the excavator (T97). While there may have been strong secondary reasons to assign a sex to this individual, they are not enumerated in the report; and from a later perspective it appears precipitate. Juvenile remains were regarded throughout this research as of undetermined sex, and treated as an isolated age-based category. No juvenile remains were found with name inscriptions or other secure means to ascertain their sex.

The sex categories used by Macramallah (1940) were accompanied by an intrinsic age assignment. Those identified as young males by the researcher were originally assigned to broad two year age categories by the excavator, between the ages of 16 and 20. Due to the small number of juveniles, individuals were not further subdivided into age categories. However, Macramallah (1940) originally identified their ages where possible. The juvenile age range found throughout the site appears to be age 7-14. Individuals older than 14 may have been identified as adults, and it does not appear that children under the age of seven were buried in the cemetery at all. It is possible that younger juvenile remains occurred in some of the tombs for which only scattered skeletal material was found, and was simply not recognized by the excavators. No age-banding by tomb groups or elevation was noted similar to that seen at the Deir el-Medina Eastern Necropolis (Meskell, 1994).

Where specified by the excavator, a note was made for adult ages, although this practise was typically inconsistent throughout. These notes were not consistent enough for further analysis. Macramallah (1940) also does not distinguish older adults, or attempt

to access lifespan. The small number of females with a specified young age (7/20) does roughly correspond to the proportion of young males to adult males, although it is less consistently noted and too small to isolate within as its own sex/age category.

The measures and statistics utilized for preliminary analysis of each grave group were also applied to each sex/age group as they occurred throughout the cemetery. The group distribution amongst the grave groups was examined. The mean, minimum, maximum, median, and standard deviation of grave volume were also calculated, as was the mean and median of richness (absolute number of grave goods) and diversity (number of types of grave goods). Richness and diversity together deliver an overall view of wealth; in combination with grave location and architecture, widely recognized as the most critical methods Egyptians used to express status in mortuary contexts (Ellis, 1996; Delrue, 2001; Szpakowska, 2008). All graves were weighted individually. Because richness was not calculable in two grave groups, the richness measure for the sex/age groups is by necessity limited only to those grave groups in which the data were available. While Kaiser (1985) calculated grave volumes, which were also used by Morris (2008), his calculations included the previously mentioned discarded graves, and were recalculated in the present study to reflect more parsimonious grave group reconstruction. The structural complexity and general location of the tombs also factored into the analysis.

The grave type, environment, and accoutrements were examined within each sex/age group, using the same methods and measures as for the grave groups. Artefact distribution by incidence and frequency was calculated by sex/age categories within grave groups and overall. Lists were created of the artifacts that did not occur at all in each sex/age category, in order to identify any type or suite of artefacts that appeared to have a significant relationship with sex and age within the cemetery. In the absence of reliable statistical measure, this procedure created a portrait of social roles and restrictions similar to that created by Savage (2000). The problems noted by Delrue

(2001) are largely resolved by the short time of use and more general approach taken at Macramallah's Rectangle. For example, no females or juveniles were interred with animal bones. These lists contribute an understanding of artefacts and burial methods that were deemed appropriate for each group at the time of their burial, and therefore highlight commonalities and differences in their relative status and position. Savage (2000) remarked in his analysis of social roles that analysing richness separately from the presence or absence of particular artefacts separates wealth and social roles more accurately. One of the great advantages of Macramallah's Rectangle is that the restricted timeframe allows incorporation of all of the tombs, not just those containing dateable artefacts.

Unfortunately, although Macramallah (1940) recorded a detailed grave register and applied his classification system fairly consistently, his classification system appears to be quite idiosyncratic. It is clear that most of the artefact and vessel forms he discovered have direct parallels to the contemporary large tombs, including references to Reisner's work at Mycerinus (1931) and the mastaba of Hor-Aha (Emery 1939). However, the descriptions of the differences between similar objects and styles in his system are quite vague. Without a clear definition of the identifying features of each type, it is not feasible to completely separate them with complex statistical methods. Similarly, it would not be feasible to use a precise point system such as that developed by Hendrickx and used by Delrue (2001) in his re-evaluation of Naga ed-Der without more consistent initial data, especially as such systems are highly affected by differential grave disturbance.

Conclusions drawn in this manner would lack meaning to impart to our understanding of the cemetery; statistical differences would not necessarily reflect identifiable pragmatic or symbolic differences. The more qualitative approach taken in these papers results in broader but more significant comparisons between tombs groups, age/sex groups, and Macramallah's Rectangle with other contemporary cemeteries. It is complementary to

the approaches taken by Kaiser (1985) and Morris (2008) while facilitating a greater depth of analysis.

ANALYSIS

Group A

Group A is the most centrally located of the seven tomb groups of Macramallah's Rectangle. It consists of 31 burials. Of these, 14 are adult males (45.2%), 4 are young males age 16-24 (12.9%), 7 are females (22.6%) and 2 are juveniles (6.5%). Four individuals could not be identified to age or sex. Most commonly, these undetermined individuals were interred in tombs that had been heavily robbed, and whose skeletal material was almost entirely destroyed. Individuals identified as adults who could not be sexed are included in the undetermined category.

Mean grave volumes for age and sex categories cluster relatively closely in Group A, ranging from 0.83 m^3 to 1.26 m^3. Young males exhibit the highest mean grave volume, while juvenile exhibit the lowest. Volume calculations were also completed using medians rather than means in order to reduce the degree of skew introduced by one or two very large or very small graves. Adult females actually have the highest median grave volume, followed by adult males. Grave size is often used as an important indicator of general prosperity and status in Ancient Egypt. Based on grave volume, no age or sex group, including females or juveniles, was consistently assigned less prestigious burial in Group A.

A comparison of tomb richness and diversity is an important aspect of assessing the overall status of individuals and groups in early Egypt. Individuals with higher economic and social status exhibit larger, more elaborately equipped graves. In Group A, females exhibit the second lower mean richness, or number of grave goods, but the highest median richness, although the medians are very tightly grouped (from 9-11). Diversity,

the number of types of goods interred with an individual, is highest amongst males, but the remaining sex and age categories cluster closely, and the juvenile median is only slightly lower than the other categories. Juveniles exhibit the lower overall diversity, but young males have the lowest overall richness.

The sex and age categories exhibit some variation in grave good types. The type B cylinder vessel occurs in most graves, and occurs in the highest quantity compared to other goods, no matter the sex or age of the individual. Three of the age/sex categories (adult males, females, and juveniles) included tombs with no grave goods other than Type B cylinder vessels. St29, either a plate with contracted edges or a very shallow bowl, is largely found in male graves, while more flint blades are found in female tombs (3 in female graves versus 1 in male). The only objects of personal adornment in Group A, an ivory bracelet and beads, are found in Tomb 7 (T7), the richest age in the group. T7 is occupied by an adult male. However, T7 was not recorded using the same artefact classification system used throughout the cemetery. A small number of graves in other groups were also recorded by description rather than using the classification system. While some artefacts, such as the cylinder vessels, are easily identified by description, others are less easily isolated.

All of the adult males in Group A were buried with an indication of burial accoutrements, such as a coffin, or fabric traces. However, this was true for just under half (3/7) of the females, half (½) of the juveniles, and ¾ of the undetermined individuals. This may indicate different levels of preparation for the funeral of an individual dependent on sex and age. Level of preparation of a body for burial was an important indicator of socio-economic status in Ancient Egypt.

Some trends were identified in the visual analysis of grave distribution in Group A, rather than in the statistical analysis. T5 is easily identified as the central grave of Group A. This

tomb was intact, and occupied by a young male, and is more than 1 standard deviation above the mean tomb volume. However, the contents of T5 lie below the intact mean richness of Group A. Its central location, intact status, and low richness may indicate that the individuals who violated Group A were aware of the general contents of the tombs. Otherwise, such a central tomb would likely have been robbed should any marker have been visible above the ground.

The two juveniles are both buried to the rear (north) and periphery of Group A, which may support the indication of lower overall status expressed in the burial accoutrements. However, females and young males are interspersed throughout the burial group. The small number of juveniles must render this a tentative conclusion, and somewhat contradicted by juvenile burials in other groups.

Body position is generally consistent throughout Group A. Most individuals are buried in a contracted position, lying on their left side, with the head to the north. This means that the individual's face and torso would face east. Males, young males, and juveniles share this pattern consistently, which is typical of the first dynasty. The lowest rate of compliance is amongst females, of whom only 4/7 (57.1%) fit this pattern. Instead, some females face south, or lie on their right sides. This lack of consistency may indicate that for some reason, this pattern of burial orientation and positioning was less important for females. However, the only individual buried in a semi-extended position, which entails a larger minimum grave size, was an adult male.

Group B

This tomb group is larger than Group A, consisting of 41 burials, which are divided from the overlapping Group C by their alignment at the point of overlap. Adult males were only 17/41 (41.5%) of the interred individuals, while the 10 young males account for another 24.4% of burials, females 7/41 (17.1%), and juveniles 6/41 (14.6%). There is only one individual of undetermined age and sex in this burial group.

Male individuals have the highest mean and median grave volume. The undetermined individual has the lowest volume, while the juveniles, females, and young males all cluster together, with less than 0.05 m^3 difference between the three age/sex categories. As adult males do not overwhelm the sample in this group, this increased tomb volume may represent a genuine differentiation within the categories indicating that adult males were meaningfully interred in larger graves.

However, once richness and diversity of the graves is taken into account, the picture becomes less consistent. While adult males have the largest graves, females are the only age/sex group to consistently exhibit increased artefact richness and diversity. A large majority of graves (82.9%) were intact, but overall, Group B is much less rich and diverse than Group A. Juvenile and young male grave richness and diversity track closely together, lower than the adult males. T59, an adult male, was very rich, and likely has a slight distorting affect. This tomb is located centrally, but in the second row of graves, which has more similarity to Group G than to other groups.

Overall, Group B contained a large number of Type B cylinder vessels, which were the most numerous artefacts. These occurred in a few tombs in larger numbers, although never in quantities above 10. This trend is particularly apparent in the adult males; 3 adult male tombs contained Type B vessels, but those 3 graves together contained 25 examples. Across all adult age/sex categories, Stone 29 (a deep plate) occurred in greater incidence (in more tombs) than did type B cylinder jars. Stone 30 also occurred in all age groups except for juveniles. Once more, two rich adult male tombs (T38 and T59) did not have their contents recorded using the standard classification system devised by Macramallah.

The only object of personal adornment, a hairpin, was found in T59. The trend of personal decorative objects occurring in only in adult male tombs appears to continue

between Groups A and B. Flint objects were also found in T59, as well as in the tomb of a young male, T62.

The presence of burial accoutrements such as coffins and fabric bands or wraps is inconsistent in Group B. Only 4/7 females and 11/17 adult males exhibit signs of burial accoutrements. Also unlike Group A, young males and juveniles are least compliant with the typical First Dynasty burial position and orientation. All five of the semi-extended burials belong to juveniles (3/6) or young males (2/10). This could be related to age or the size of the individuals; there may have been no need to bury smaller individuals in a contracted position if they fit in a tomb dug with the same amount of labour as a tomb for a contracted, but fully grown, adult.

Visual trends apparent in Tomb Group B include a possible cluster of juveniles and young males near T59. T59 is the most visually central tomb, and is likely to have been very rich prior to violation. The size extremes appear to cluster in this central area. There may be a distinct status indication in the grave sizes; which could represent a high status male and servants or children. All of the graves more than one standard deviation above the mean belong to adult males, while only females or young males occupy tombs more than one standard deviation below the mean volume for Group B. However, all age/sex groups occur in each major row, and in all locations within the rows, with no category obviously shifted towards the periphery or centre.

Group C

Group C is somewhat smaller than Group A or B, containing only 23 tombs. Group C is differentiated from Group B by its lack of a third row of tombs, and the central overlap between the two slightly offset main lines of tombs. Eighteen (78.3%) of tombs are occupied by adult males, 2 (87%) by females, 2 (8.7%) by young males, with 1 juvenile (4.3%), and no remains of indeterminate sex or age.

The females in this group occupy tombs of a slightly higher mean and median volume than the males or young males. The single juvenile individual's grave is larger than the mean or median of any of these groups. However, that juvenile's tomb (T97) does not lie outside of the range of standard deviation for Group C, suggesting that this result is not significant. Additionally, T97 is located on the far eastern margin of Group C.

There are a relatively small number of violated tombs in this group (5/23 or 22.0%). The grave richness and diversity of the intact tombs was higher amongst the young males. The richest graves by far in this group belong to a juvenile (T97) and a young male (T98). The adult male and female richness and diversity hover more closely together, although still higher amongst the females. This trend may be related to the status of women and children who were buried in this cemetery, and perhaps why there are so few females and juveniles buried at Macramallah's Rectangle. Regardless of whether these statistics reflect genuine difference in status, it is worth noting that in Group C, the only two intact burials with no artefacts both belong to adult males.

No Type B ceramics were found in this cemetery group. Kaiser (1985) suggested this absence may be because Groups C and D were later in date than the rest of the cemetery, and that the materials in these groups are derivative of those in the southern sections of Macramallah's Rectangle. Ceramic Type A, also a cylinder jar, appears instead. However, in common with more southerly areas of the cemetery, St29 is the most common artefact to find in this group. The most frequent artefact in Group C differs by sex/age category, although this distribution may be skewed by low numbers. Amongst adult males, the most frequent is Type A, then Stone 29; amongst females, it is Type G; for young males it is Stone 4 (a squat jar); and for the juvenile it is Type A. It is important to note that individual tombs strongly influence these rankings. The only object of personal adornment was an ivory hairpin in a young male grave on the far eastern side of the group. Flint blades were found in the tomb of an adult male nearest to the boundary with Group B.

Only three of the tombs in Group C were almost certainly without grave accoutrements (T72, T69, and T95), all intact tombs of adult males. The majority (78.3%) of individuals in Group C are interred in coffins. There is a great compliance with the standard First Dynasty burial position. Unlike Group B, all of the non-compliant individuals are adult males. All males but one are in a contracted position, all of the individuals are interred with their heads to the north, and all but 3 adult males are lying on the left side. Interestingly, two of the three males non-compliant with typical burial positions were also two of the three males without grave accoutrements; they were buried prone, with their head to the right. These two males are also the closest tombs to Group B. However, this burial position is not typical of Group B either. These two individuals may represent a boundary marker of some variety between Groups B and C. The presence of flint blades in T69 may support this interpretation, if the blades are accorded the marking function posited by Morris (2008).

Visually speaking, it is obvious that unlike other groups where the largest or richest tombs are central, the two richest graves (juvenile and young male) are at the far eastern side of the cemetery, far away from Group B. Only the western half of this group, closest to Group B, has been violated. This may suggest either that goods in the eastern portion were not as valuable to robbers, or that the robbers did not have an exact awareness of the cemetery layout, or that the robbers assumed that graves in the central area were more valuable. One highly unusual grave in the eastern half of Group C (T99) is more than one standard deviation above the mean volume, intact, and contained no goods. T99 may provide wider support for Szpakowska's (2008) statement that at Middle Kingdom Haraga, grave size, wealth, and diversity acted as separate, although complementary, ways to demonstrate wealth and status.

Group D

Group D is the same size as Group C, containing 23 tombs. Of these, 15 (65.2%) contained males, 2 contained females (8.7%), 3 held young males (13%), and 3 juveniles (13%). Group D is slightly less organized than Groups B or C, with smaller tombs than the preceding 3 tomb groups. The northernmost tomb group in the cemetery, Group D is cut by a small number of New Kingdom graves. One of the tombs, T148, contained an intrusive New Kingdom kohl jar.

Mean grave volumes indicate that males and young males were interred in larger tombs than were females and juveniles in Group D. The largest volumes belonged to young males. The same pattern holds true when the median is used instead of the mean; juveniles have the lowest grave volumes overall (median 0.58 m^3, while young males median is 0.91 m^3).

Grave diversity and richness is generally very low compared with other tomb groups in Macramallah's Rectangle. Most graves, 16 of 19 of the intact tombs (84.2%) do not contain any artefacts at all. Adult males are the only individuals in this tomb group who are interred with any burial goods at all. Amongst adult males buried with grave goods, none of the tombs contain a second artefact of the same type. Based on overall occurrence, Type A cylinder jars are the most frequent artefact, but the sparseness of the tomb assemblage appears strongly and undoubtedly linked to the status of the individuals buried within this group. Oddly, the tombs with grave goods include the smallest, but not the largest, of the adult male graves. This trend towards large and empty graves for adult males may indicate that the graves were constructed directly by families, because additional digging labour would have been easier to supply for a poorer family than sparing goods to bury.

Also worth noting is the age distribution of the individuals buried in this tomb group. Using the ages stated in Macramallah's site report, 7/16 (43.6%) of the intact tombs contained individuals under the age of 25. This feature includes a young adult female, three young males, and three juveniles. Most of the individuals were buried in a contracted position, although 2 of the 3 juveniles were buried in a semi-extended posture. Both of the individuals who were not buried in compliance with normal First Dynasty positions were adult males, who were buried facing right rather than left.

It is possible that this differing demographic represents, as Kaiser (1985), a different and later group construction. However, the general construction of Group D, with two rows of graves with an additional partial row to the west, is strikingly similar to that of Group B. The orientation of Group D is also more similar to that of Group A than to Group B or C. Clearly, Group D was constructed in reference to the entirety of the cemetery, not just to its nearest neighbour.

Just over half (15/23) individuals were buried with grave accoutrements. However, unlike most of the rest of the cemetery, coffins are relatively rare (2/23 burials), while mat burials are common (13/23). Most of these mats are made with the grass species locally called Halfa. The prevalence of mat burials is another clear separation from Group C, which contained only two mat burials and one possible basket burial.

Visual examination of the tomb group map indicates that all of the graves with a volume more than 1 S.D. above the mean were without goods. The violated tombs in this group appear to cluster at the rear of the tomb group, which is somewhat illogical because these tombs are farthest from the richer southern tombs in Macramallah's Rectangle. However, they are closer to the New Kingdom tombs, which may suggest a different robbery pattern and date.

Group E

Group E is the largest tomb group in Macramallah's Rectangle. It is also the most southerly, and closest to some of the larger mastabas and elite tombs on the ridge of the Saqqara plateau. Many of the tombs are more complex in construction and larger than those in other tomb groups. Clearly, Group E stands apart in some significant way from the rest of the cemetery. Some of the ways in which Group E is different become readily apparent in an analysis of sex and age variation.

The sex distribution of Group E is unusual. The tomb group has been heavily robbed. Of the individuals, 23/78 (29.5%) are males, 3 (3.8%) are young males, and there is 1 juvenile (1.3%). No remains identified as female were found in tomb Group E. It is important that, due to higher humidity levels in the deeper-dug graves and higher frequencies of grave violation, the majority of 51/78 (65.4%) of individuals could not be sexed at all. A number of researchers have been greatly concerned by the absence of female remains in Group E, and have constructed the absence of female remains as evidence of a selection process for burial that involved a higher authority, organization, and possibly a sacrificial event. However, it is clear that given the percentage of mostly destroyed remains, this is likely a case in which absence of evidence is not evidence of absence. In addition, as the juvenile remains are not sexable, it is entirely possible that the juvenile was a female. And as previously mentioned, early methods of sexing skeletons produced a sizeable bias of approximately 12% towards identifying males (Weiss 1972).

Grave volumes are slightly distorted by T230, by far the largest tomb in the cemetery (volume 16.49 m^3). This abnormality is illustrated by the difference in mean and median grave volume. Overall mean volume is 3.46 m^3, while the median is 2.77 m^3. It is worth noting that the single juvenile grave is larger than all 3 of the young male graves. In addition, the juvenile grave is larger than the adult male mean and median volumes.

No richness comparison was conducted because only 3 of 78 tombs are intact. It is more appropriate to look at diversity; it is less likely that a robber would take all of a particular artefact class in a tomb than that they would take anything at all. Diversity analysis is the best way to look at wealth and status in such a disturbed burial environment, given the available documentation. Diversity statistics were examined overall, rather than solely in the very small number of intact tombs. Although tomb types were not examined directly with artefact diversity, the great variation in tomb type in Group E compared to the other tomb groups is worthy of note. The male and young male diversity mean and median were fairly close, given the data issues for this group. The juvenile tomb was completely robbed out.

Group E actually displays lower artefact diversity that does Group A. This difference seems more an indication of robbery frequency and success than a genuine reflection of original grave contents. None of the tombs with a diversity of 0 are intact, and 6/19 (31.6%) have notes appended indicating the presence of vessel fragments. The higher mean and median diversity in intact tombs is also probably indicative of robbery, as the intact tombs, which were not those likely to have the highest status based on tomb size, occur to the north half of the group; and were likely low priority robbery targets.

The most common goods in male tombs are ceramic Type C storage amphorae, then Type B cylinder jars, then Stone 29 bowl/plates. However, the most frequent type is Ceramic B for both males and young males. Amongst young males, Ceramic type D (storage jar) is also frequent, rather than the projectile points or flint blades often interred with adults. Objects of adornment such as shell beads and bracelet fragments are also buried with males.

In 93.6% of tombs, the burial posture is unknown; in 84.6% the grave accoutrements are also unknown. The trend indicates that the majority would probably have followed the First Dynasty burial pattern.

Visually speaking little can be discovered given the overall state of the tomb group. All three young males were buried in the southernmost five rows, potentially more elite. Trends regarding Group E are not noticeably linked to sex or age. The limits of available information make it possible that trends existed prior to the extensive disturbance of the group, but these are no longer accessible to researchers. It is likely that age and sex played a role in making it possible for individuals to be buried in Group E but that status factors other than age decided which individuals, mostly male, would be accorded this burial status.

Group F

Group F is the most obviously organized and planned tomb group in Macramallah's Rectangle. The line of 22 tombs runs NE to SW along the eastern edge of the cemetery, closest to the cultivated river valley. The tombs are all of the same structure, Type A, and have remarkably close sizes and spacing. However, there are no direct shared physical areas between the tombs, such as shared walls or a group foundation, and Macramallah (1940) does not indicate any use of cell construction. The group has also been entirely robbed, with 15/22 individuals (68.2%) unsexable. Of those who remain, there were 5 males (22.7%), 1 female (4.5), no young males, and 1 juvenile (4.5%). The presence of a female in the group, while lacking young males, may be an example of how extensive grave disturbance could have affected the apparent sex distribution of Group E, particularly given the similarities of adult male frequencies.

All of the grave volumes are relatively close. The female and juvenile tombs, while larger than the male median and mean, fall within the range of the largest male grave. The variation between means is only 0.17 m^3.

Just as in Group E, the proportion of violation tombs made a richness comparison unfeasible. In Group F, 100% of the tombs were violated. Even so, the diversity analysis was very interesting. Of individuals with remaining burial goods, the female had the highest diversity count by categories of artefacts, while the juvenile was slightly below the male mean. However, the male mean was 1.8 categories of artefact, while the median was only 1, indicating that most sexable individuals tend to have only one category of artefacts recorded as present in their tomb. The most common artefact was flint blades, as mentioned by Morris (2008), while the next most common was Type B cylinder jars.

In this group, no tomb had more than one remaining Type B cylinder jar; and neither the female nor the juvenile had one. Flint blades represented more than half of the burial goods found in tomb Group F, and were found in all three of the age/sex categories present. There was a noticeable dearth of stone artefacts compared to the frequency of stone vessels found in other tomb groups. This distribution may indicate either that they were robbed very thoroughly, which would be odd because so many were left in other violated tombs; or that Group F never had many stone artefacts to start with, which implies that the perceived value of or access to stone items was different amongst this group.

One of the adult males and the female were the only individuals whose burial position was even slightly discernible. However, both were buried in a semi-extended position, which suggests that Group F's burial traditions may be different from the rest of the cemetery. Both individuals were lying with their heads to the north, although the male was on his left side and the female her right. Traditionally, even individuals in subsidiary tombs to great mastabas were buried in a contracted position, although they were sometimes oriented towards the mastaba (Reisner, 1936). Macramallah made no notes regarding grave accoutrement, possibly due to the extent of grave disturbance.

Neither the female nor the juvenile is marginalized in the Group F tomb distribution; both tend towards the centre of the line. Grave size and location does not appear to be correlated with age/sex categories. Visually speaking, there is a possible trend for graves containing Type B ceramic vessels to lie north of the line, while graves with flint blades lie more to the south.

Group G

Group G, as mentioned by a number of scholars (Kaiser, 1985; Morris, 2008; Baka, 2011), is both the smallest and the most idiosyncratic of the tomb groups of Macramallah's Rectangle. However, this is no reason to disregard the group. It is, in fact, an argument for the critical value of analyzing Group G; because Macramallah's Rectangle as a whole is an idiosyncrasy, it is important to examine both its norms and its exceptions to understand its range of purposes, functions, and the choices of its creators.

Of the 10 individuals interred in this group, 5 are male, 1 is female, 2 are young males, 2 are undetermined, and there are no juveniles. There is also the highly unusual instance of a partial young male buried with an adult male. This is the only multiple burial in the cemetery. Due to the small size of this tomb group, and its unusual properties, the grave volume indicators highlight some peculiarities. The male mean and median tomb volume is roughly 30% of the size of the female and young male tombs.

Of the 10 graves, 4 are intact and without burial goods – all of these are males or young males, and all of these tombs are below the mean volume for the group. There is strong evidence in Group G for an extreme skew in tomb size, apparently linked to sex and age, and strongly status linked. The grave size trend continues in the richness and diversity analysis. The male numbers are lower than the female, and far lower than the young male mean and median. The adult male mean and median richness and diversity never exceed the value of 1.

The size of Group G is so limited that artefact frequency and incidence are almost useless. However, in young male graves, type B ceramic vessels represent 50% of the grave goods, followed in frequency by type 29 stone vessels. The occurrence of type B vessels, as well as a seal of King Den, is a strong argument that the idiosyncrasies of Group G are inseparable from the original purpose and structure of the cemetery.

There is more diversity in Group G than amongst other groups in burial patterning. The rate of contracted burials is similar to other groups, but when the side of the burial is examined, burials on the left side and those on the back are extremely similar, at a 4:3 ratio. Individuals are consistently buried with the head to the north. Only one individual, the female, is interred in a coffin. Three individuals, an adult male and two young males, are buried without accoutrement, and the remaining 6 are buried in mats.

The strongest visual trend in Group G concerns the group orientation. The largest graves in Group G are at the north end of the group, followed by two very small rows of tombs to the south. This entirely reverses the grave size and status orientation of the rest of the cemetery, but further details are difficult to gather, as the two largest tombs, T146 and T147, were almost entirely robbed out, and the individuals could not be aged or sexed. Otherwise, no age or sex based trend are apparent in visual examination of the tomb group.

RESULTS

Females

Of the 20 females identified at Macramallah's Rectangle, 17 were found in intact tombs. Seven of the twenty (35%) were identified as young in age, which is higher than the percentage of young males relative to adult males. Given the increased risk of childbearing and early death, and the shortage of weapons which might presuppose males towards early death, this ratio is to be expected, but still lower than normal (Patch 2007; Szpakowska 2008).The majority of the females (14 of 20) were buried in Groups A and B, the apparently middle-status tombs groups based on this analysis. Overall, female tombs exhibit the highest richness and diversity; a wealth which may be partially due to the extremely low rate of tomb violation compared to male tombs (85.5% intact versus 57.7% intact).

Female tombs may not have been targeted for robbery because the contents were generally known to be of lower value that the contents of male burials. All but one female were buried in a contracted position, most on the left side, and all but one with the head to the north. A majority of females were buried with some type of grave accoutrement. A large majority (80%) were buried in Type A tombs. In other words, female graves generally met the typical physical description of tombs at Macramallah's Rectangle. Their tombs contained relatively large wealth and diversity of grave goods, a feature which is likely related to having the highest proportion of intact burials of any age/sex category.

In a comparison of incidence and frequency of artefacts in female tombs throughout the cemetery, the highest incidences were Type B jars, Stone Type 29, and Stone 30. Artefacts with frequency above two included the above, plus Type G ceramics, Stone Types 33 and 36, and flint blades. Lacking in female graves were, notably, any of the Phoenician type ceramics, the majority of types of stone vessels, any ivory, and objects for personal ornament, flint knives, and animal bone. The animal bone is particularly

interesting because of the low frequency of its occurrence in this cemetery, and the extremely low chance that a tomb robber would steal a rotted food offering or animal sacrifice. Animal bones are spatially restricted to Group E; while it is tantalizing to suggest a difference in the ritual treatment of males and females based on this evidence, it is equally likely that animal bones were only associated with Group E tombs, and for the reasons previously discussed, females who may have been buried in this Group with or without animal offerings do not register archaeologically.

The lack of ivory and personal ornaments is consistent amongst females of all tomb groups, and may represent a genuine sex-based construction of appropriate grave goods. This absence would be unusual, because females are interred with personal ornaments in contemporary burials at Tarkhan (Petrie et al., 1913), although Emery (1954) does not note personal ornaments at all from contemporary subsidiary burials. However, Ellis (1996) argues that rich female burials were intended to display male-dominate corporate group status; perhaps the competition in Macramallah's Rectangle is not based on competing corporate groups. Personal ornament is certainly known from females at Predynastic Naga ed-Der, as well as elite monuments at Abydos and Saqqara. None of the graves of the courtiers excavated by Petrie that contained personal ornaments could also be sexed (Petrie, 1925), so an unfortunately useful comparison is not possible.

Before the reader concludes that females were simply not interred with higher status goods, it is important to note that a copper blade, flint blades, and ochre were found in female graves. If the females in Macramallah's Rectangle were accorded lower status than males, it appears to have been demonstrated by burial elsewhere, as suggested by Meskell (1994); lower or prohibited access to particular goods that may have been related to funerary offerings and ritual; and rare burial in higher-status grave groups.\

Juveniles

A total of 14 juveniles were identified by Macramallah's team, of which 11 were buried in intact graves, and nearly half (6) were interred in group B. The excavators specified that the juveniles fell into an age range of 7-14 years of age. However, the excavators also sexed one of these individuals, which datum is unlikely to be reliable. There is an apparent utter lack of infants or toddlers. This may be related to inexact ageing of individuals, but it is also reasonable to assume that, like many Egyptian cemeteries, infants and young children were buried elsewhere. The juveniles buried in Macramallah's Rectangle may not have been perceived entirely as *children*, particularly when it appears likely that the average lifespan did not exceed 40 years. Estimates of generation length from Predynastic Naga ed-Der run 20-45 years (Delrue, 2001). Additionally, a Third Intermediate Period cemetery at Abydos contained, significantly, at least one grouping composed solely of juveniles aged 0-6 years old and adult women (Patch, 2007). Although chronologically distant, the existence of cemeteries of this nature would neatly explain the demographics of Macramallah's Rectangle.

The richness and diversity of juvenile graves is much below that of male and female adults, although only slightly lower than that of young males. Burial position is extremely flexible amongst juveniles, as six were buried in contracted positions, five in a semi-extended position, and three whose positions were unknown. This may be related to the fact that juveniles did not need to be as tightly contracted to make tomb construction a reasonable effort. Ten of the 11 juveniles buried in a known position were buried on the left side, and the same percentage was buried with their head to the north, typical of the period. A small number of individuals were given coffins, mats, and leather bags as burial equipment, and 9/14 (64.3%) were buried in Type A tombs. The others were all buried in relatively small and unelaborated tombs types, including two of the three small circular tombs. The last circular tomb could not be securely located, and had to be excluded from analysis. The "status compression" seen in these child burials is similar to that seen by Meskell (1994) in New Kingdom child burials.

The juvenile graves contain a very small number of artefacts, and only Type A and B ceramics and Stone 29 (the most common types of goods in the cemetery) occur more than once in the juvenile assemblage. Although some of the tombs contained stone vessels, the most “luxurious” grave gods were an “Aegean” type vessel, and a flint blade. No ivory, metal, or animal bone occurred in any of the juvenile tombs.

Based on these results, it is clear that juveniles buried in this cemetery were of an age at which they may have been somehow employed outside their family, or at least contributed to the household (Patch, 2007). They were buried with less effort and equipment than the surrounding adults, although not solely in lower status areas of the cemetery. Their probable lower wealth and status is most clearly demonstrated by the relative scarcity of grave goods in their tombs, and their general lower size, as neither appears disproportionately affected by tomb violation. The relative rarity of juvenile graves strongly suggests that many were buried in other cemeteries.

Young Males

Macramallah and his team identified a total of 24 young males aged 16-24 buried in Macramallah's Rectangle. Of these, 18 were intact. These individuals were more evenly spread about than were the females and juveniles, although the largest percentage (41.7%) was found in Group B. Most of the young males were buried in a contracted pose (70.8%), with their heads to the north (70.8%), on the left side (58.3%), and in a Type A grave (83.3%). Just under half (41.7%) of the young males were buried in a coffin.

The overall richness and diversity of the young male graves indicates that they had both fewer and fewer types of grave goods than did females or older adult males, although more than the juveniles. This distribution is borne out in the types of artefacts buried with young males, which are predominantly different forms of ceramic vessels, including of course Type B cylinder vessels. This group, unlike the juveniles, includes several examples of Aegean vessels, not a utilitarian object. In addition, goods such as flint

blades and an ivory hairpin occur within the young male group. Lastly, there were two examples of young males buried with animal bones, a frequency which is larger than any other group. Because animal bones occurred only in Group E, it could be argued that this distribution is evidence of increased status of these young males.

While young males were not necessarily the highest status individuals in the society that created Macramallah's Rectangle, they were not a disadvantaged population. Generally speaking, young males have graves of larger size than the juveniles or females, some luxury goods, and likely some type of grave equipment. A few appear to have occupied a privileged position. Interestingly, the presence of only one flint blade does not appear to support any interpretation of this young male group as more likely to participate in warfare, violence, or butchering than older males, or, for that matter, females or juveniles. Their lower grave wealth and diversity may be owed to owning fewer personal and household goods, if these individuals had not yet established their own households.

Males

Adult males are by far the most numerous sex/age group in Macramallah's Rectangle. There were 97 individuals sexed as male; of these, only 56 were in intact graves. This extremely high rate of tomb violation relative to the other sex/age categories is largely due to the distortion caused by Group E's almost total destruction. Males occur in large proportions in all tomb groups, and almost all grave types. Male tombs have the largest overall grave volume mean and median.

Almost all males buried in a known position are contracted (90.1%), with most (81.4%) on their left side, and with their head to the north (93.0%), as is typical of DI. Males are interred in several types of tombs, although it should be noted that most of the larger and more unusual tomb constructions were robbed so thoroughly that the sex of their occupants could not be assessed. The majority (79.4%) are buried in Type A tombs, with a coffin (38.1%), a mat (16.5%), or both. A smaller number of males were also interred

with fabric bands or, in one case, in a basket. Males are buried with a greater variety of fittings than is typical of other age/sex groups at Macramallah's Rectangle.

The intact richness mean of male tombs is below that of females. However, many of the male tombs are located in groups so frequently violated that their richness could not be reliably calculated. When diversity is considered, the differential impact of tomb robbery on male graves becomes more apparent. The diversity of *intact* male tombs is well below the female overall. However, the *overall* diversity mean of males is within 0.05 of females. This indicates that the *robbed* male graves still contained a far greater diversity of goods than the intact graves. Rich male graves were likely deliberately targeted by robbers because they were known to be rich.

Many males, although not all, occupied a privileged social position. Their graves were larger, sometimes more architecturally complex, and contained a large variety of luxury goods including beads, necklaces, palettes, and bracelets, ivory artefacts of a variety of types, metal goods, of which only a single example was found in a female tomb, animal bone, flint, a great variety of ceramic and stone vessels including Aegean ware, and finally, the only materials other than vessels and sealings to bear inscriptions in the whole of the cemetery (Ivory labels from T59, the tomb of Ip-Ka, and the inscription of Doua in T231).

The two summary tables below (3-1 and 3-2) serve to highlight the previously mentioned differences in burial treatment between sex and age groups. Table 3-1 demonstrates the difference in grave goods deposited between demographic groups, using material as a briefer proxy for overall diversity. Table 3-2 summarizes the quantitative differences between demographic groups, particularly in tomb construction.

Table 3-1: Grave Material Occurrence by Sex/Age Group

	Coffin	Fabric Body Wrapping	Mat	Ceramic	Import-type Ceramic	Stone	Palettes	Ivory	Bead	Copper	Flint	Wood	Animal Bone
Males	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes
Young Males	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	No	No	Yes	No	Yes
Females	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No	Yes	Yes	Yes	No
Juveniles	Yes	No	Yes	Yes	Yes	Yes	No	No	No	No	Yes	Yes	No

Table 3-2: Tomb Statistics by Age/Sex Group

	Min Grave Volume (m^3)	Max Grave Volume (m^3)	Mean Grave Volume(m^3)	Median Grave Volume (m^3)	Mean Intact Diversity	Median Intact Diversity
Males	0.2	11	1.6	1	1.9	1
Young Males	0.1	3.3	1.2	0.8	1.8	1
Females	0.1	1.8	0.9	0.8	2.5	2
Juveniles	0.4	4.2	1	0.8	1.2	1

CONCLUSIONS

Den's reign was a high point of First Dynasty bureaucratic expansion combined with economic stability. The population of the Memphis area appears to have been growing at this point, and crowding of burial spaces caused the opening of several new cemeteries or sections. The purpose and composition of some of these cemeteries, including Macramallah's Rectangle, is still unclear. It is not possible to reconstruct the sex and age distribution of burials at Helwan (undoubtedly the largest cemetery in the area), but both Tarkhan and Macramallah's Rectangle exhibit sex imbalance at this time. Juveniles in both cemeteries are relatively rare, and infants non-existent. There is strong

evidence to support separate (possibly intramural) burial of young children throughout much of Egyptian history. It is likely that infants, toddlers, and women who died in childbirth may have been buried elsewhere, rather than in Macramallah's Rectangle.

The females and juveniles that were buried at Macramallah's Rectangle may have held particular qualities or statuses that precipitated their burial in this location. As previously discussed, they may have been employed in some manner by a household or elite individual who planned the cemetery. Alternatively, they may have been family members of others interred in the cemetery. Without multiple graves or inscriptional evidence, familial relationships are difficult to establish from individual graves within larger burial groups.

It is clear that neither the females nor the juveniles at Macramallah's Rectangle were the focal individuals of the cemetery. Adult males had on average, the largest tombs, the largest variety of tomb types, and access to the most unusual grave goods. While most of the males interred in Macramallah's Rectangle were not elites, many of them appear to have experienced significant status advantages compared to the majority of females, juveniles, and even younger males. This is a typical Egyptian cemetery narrative and expression of status through pageant (Meskell, 1994). The devastation wrought by robbery of the largest tomb group makes it difficult to assess the full scale of the advantage experienced by males at the cemetery. Equally, males appear to have been more likely to have been buried in the poorest graves. Males appear to have had more access to potential, whether that led to security or poverty.

During Den's reign and his mother Merneith's regency, there is evidence that elite women of various degrees received quite lavish burials, including Merneith herself. Egyptian burials transitioned from frequent high status burials for Predynastic women to the distinctly subsidiary Queen's burials of the Old Kingdom, and later the male-centred family tombs of the Middle and New Kingdom. Many authors view this transition as

intrinsically linked to the growth of state-level society and bureaucracy. Macramallah's Rectangle appears to represent a particular point in this transition, in which children have partially inherited or ascribed status but few grave goods reflecting it, and females experienced limits on their relative status and access to ritually significant materials. In short, the cemetery demonstrated an apparent glass ceiling. The increased wealth of older adult males versus younger males is likely due to their increased experience and potential leadership in Den's increasingly stratified and bureaucratized Egypt, especially so close to Memphis.

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Chapter Four: Status and Grave Groups at Macramallah's Rectangle

INTRODUCTION

Egypt's First Dynasty has long been a focal point of scholarly interest, although the public imagination has been more often caught by the later pyramids. However, without the First Dynasty elite to gather authority unto themselves and create a hierarchal and monumental tradition, the later monuments would not have been feasible. The implications of status and authority in the First Dynasty are critical to understanding the complex interweaving history, archaeology, and narrative of later Egyptian periods. Unfortunately, most of the First Dynasty settlement evidence has been buried beneath layers of habitation; most of the clearly excavated and published mortuary evidence from the period regards only the high elite. This leaves such a shortage of burials for the non-elite population that some authors, such as Murray (1956) have suggested that common Egyptians would not have been interred.

Macramallah's Rectangle (Macramallah, 1940), a cemetery of 231 tombs located on the Saqqara Plateau, provides researchers with an unusual opportunity. The individuals buried in this cemetery almost certainly originated from near the capital of Memphis, and would therefore have been aware of a complex hierarchy of power during their lifetime. The cemetery construction follows most of the accustomed norms of the Early Dynastic period, and the burials themselves do not exhibit such large anomalies as to suggest an entirely atypical origin. Macramallah's Rectangle appears to have been established and used over a relatively short time span during and immediately after the reign of Den in the mid First Dynasty; it was also excavated entirely at one time, overseen by the same individual. Finally, the graves and individuals therein demonstrate clear status differentiation between burial groups.

This intersection of circumstances renders Macramallah's Rectangle an ideal cemetery from which to attempt to reconstruct non-elite mortuary status expression in the First Dynasty. This analysis will demonstrate that markers including grave size and construction, wealth, and spatial organization were used by the individuals buried at Macramallah's Rectangle, their families, or an authority, to construct a continuum which suggests that during the increasingly hierarchal First Dynasty, even non-elites were conscious of position and display. While there are some aspects of the cemetery that suggest restricted or sumptuary access to certain goods, most burials appear to occur along a spectrum suggesting at least some flexibility of status or wealth between burial groups.

CONTEXT

Most of the evidence for First Dynasty Ancient Egypt comes from mortuary contexts, as the settlement remains have been almost entirely obliterated by time and later habitation (Wilkinson, 1999; Bard, 2000). Although there are more numerous examples of non-elite tombs than elite, the elite tombs have undoubtedly been more thoroughly reported (Grajetzki, 2010). Remains of the large majority of Egypt's population have never been found. Some researchers (Murray, 1956) have suggested that this situation may be because even the poorest tombs that archaeologists have found have not been peasant's graves, and that peasants may have been exposed in the desert, or lain in the river or the fields.

Additionally, the larger (and therefore easier to find) Early Dynastic cemeteries were generally excavated quite early in Egypt's history of archaeological investigation. Early excavations did not publish or necessarily keep data on all of the tombs they dug, or the skeletal material; they often focussed on a few representative or unique examples (Saad, 1969). A number of non-elite tombs were found clustered in rows around elite mastabas or funerary enclosures of the First Dynasty; but like the tombs central to these groups, they are robbed and destroyed (Petrie, 1922; Petrie, 1925).

Social status, and the terms associated with it, is difficult to define, particularly in archaeological cultures. In this paper, the elite hold wealth and power. The non-elite, whether a low, middle-class group with internal rank, or a popular class are those whose remains do not suggest that they held significant control over the lives and livelihoods of others (Grajetzki, 2010). Egyptians themselves seem to have divided society into elites, and the general public, which included skilled professions with relative wealth (Grajetzki, 2010).

The desire to display social status remained an essential element of Egyptian funerary ritual through time. In early Egypt, this appears extremely strongly correlated with grave size, construction, location, and wealth of the grave contents (Wilkinson, 1996; Grajetzki, 2010). During the First Dynasty, elite burials are generally in large and complex mastaba tombs. These tombs contain extensive stores of household goods, particularly food, but also furniture, personal beauty and gaming equipment, and animal offerings. Burials subsidiary to the largest mastabas, usually those of royalty, might include humans (of inconclusive relation to the elite tomb owner) as well as animals such as lions (Bard, 2000). It appears that during the First Dynasty, the most elite burials occurred at Abydos, with cenotaphs at Saqqara; nobles and high officials were largely buried at Saqqara along the escarpment edge (Wilkinson, 1999; Bard, 2000). A strong heredity factor helped to determine status (Szpakowska, 2008; Grajetzki, 2010).

Non-elite or less elite burials, on the other hand, generally occur in desert cemeteries relatively close to the river's edge and likely proximate to settlements as well. Tombs are located in cemeteries of varying sizes that are often used consistently from the late Predynastic through at least the First Dynasty, such as at Helwan, Tarkhan, and Naga ed-Der. Tombs are generally constructed individually, with reference to local topography and richer tombs in the area; larger and richer tombs are often constructed on higher ground (Wengrow, 2006).

Most graves from this period are simple pits, semi-rectangular to rectangular in shape; larger and richer tombs in village or larger cemeteries will often be mud-brick, with some remnants of a mastaba superstructure. Cemeteries vary dramatically in size even in the capital region; Helwan would have held many thousands (Saad, 1969; Wilkinson, 1996), while the apparently wealthy Kafr Ghattati may have belonged to a single family (Engles, 1990). Wealthy individuals are often identified by name painted on their grave goods. Like elite tombs, the tombs of non-elites often contain personal ornaments such as jewellery and cosmetics, as well as storage vessels, games, furniture, and coffins (Bard, 2000). The poorest may be buried without goods, a coffin, or architectural elaboration of the tomb itself, a situation which makes it much more difficult to date these tombs (Wilkinson, 1996).

Studies of status expression and wealth amongst non-elite early cemeteries often focus on the beginnings of status differentiation in order to identify the start and extent of hierarchy at any given time; determining when amalgamation and kingship began has been an important focus of Egyptian archaeology (Grajetzki, 2010). Other foci of status investigation have included identification of family or other competing corporate groups. Most authors take for granted the close association of grave size, architectural complexity, and wealth in particular with social status in ancient Egypt.

The social hierarchy beneath the early Egyptian kings is not as clear as in later periods. There is strong evidence that King Den inherited the kingdom from his father, likely via a regency held by his mother Merneith (Wilkinson, 1999; Kahl, 2006). Den also appears to have had at least one long-serving chancellor, Hemaka. Hemaka was buried at Saqqara, and the artefacts buried in his mastaba parallel those found at Macramallah's Rectangle. Den is known to have greatly expanded the governance and bureaucratic capabilities of the kingdom over the course of his long, stable, and wealthy reign. He also facilitated at least some territorial expansion, although the means he used are not entirely clear (Wilkinson, 1999; Bard, 2000; Wenke, 2009).

The king's relatives appear to have been granted official recognition in the form of larger tombs and richer burials; assignment of government offices to members of the royal family is consistent with later Old Kingdom structures, in which high officials and the royal family have been treated as interchangeable (Roth, 1993). There is evidence that some of the working estates known from later materials also existed at this point, including a label from Macramallah's Rectangle (Macramallah, 1940; Bard, 2000). The presence of ascribed or inherited status is not as clear in non-elite contexts; it is unknown whether minor official capacities would have been inherited offices, or distributed on the basis of merit. It is entirely possible that Den's significant expansion of the bureaucracy resulted in at least some merit appointments.

Social status was linked to age and sex. The effects of age and sex on burial have been discussed in some detail in the preceding chapter, but it is important to note that high offices would not routinely have been held by women (Wilfong, 2010). Even Merneith the regent, likely the most powerful woman in the state for at least several years, was buried in a comparatively small mastaba; and sometimes is listed after her son in king lists (Kahl ,2006). Multiple burials and family tombs are uncommon during this period; most burials are in individually dug tombs. Macramallah's Rectangle has only one double burial (T89), and its violated state makes the original status of this tomb difficult to assess (Macramallah, 1940). Individual tombs make it more difficult to assess the potential relationships between spatially close tombs that do not contain names; most non-elite burials from this period do not contain names. Subsidiary tombs often have names painted on the walls (Petrie, 1900).

MATERIALS AND METHODS

Most researchers believe that the entirety of Macramallah's Rectangle was constructed and used during and immediately after the reign of Den. The alternate suggestion, by Kaiser (1985), is that three of the tomb groups may have been constructed later, filling in gradually until the end of the First Dynasty. Arguments for and against this hypothesis

have been presented in literature review, and will be further discussed later in terms of the purpose of the cemetery.

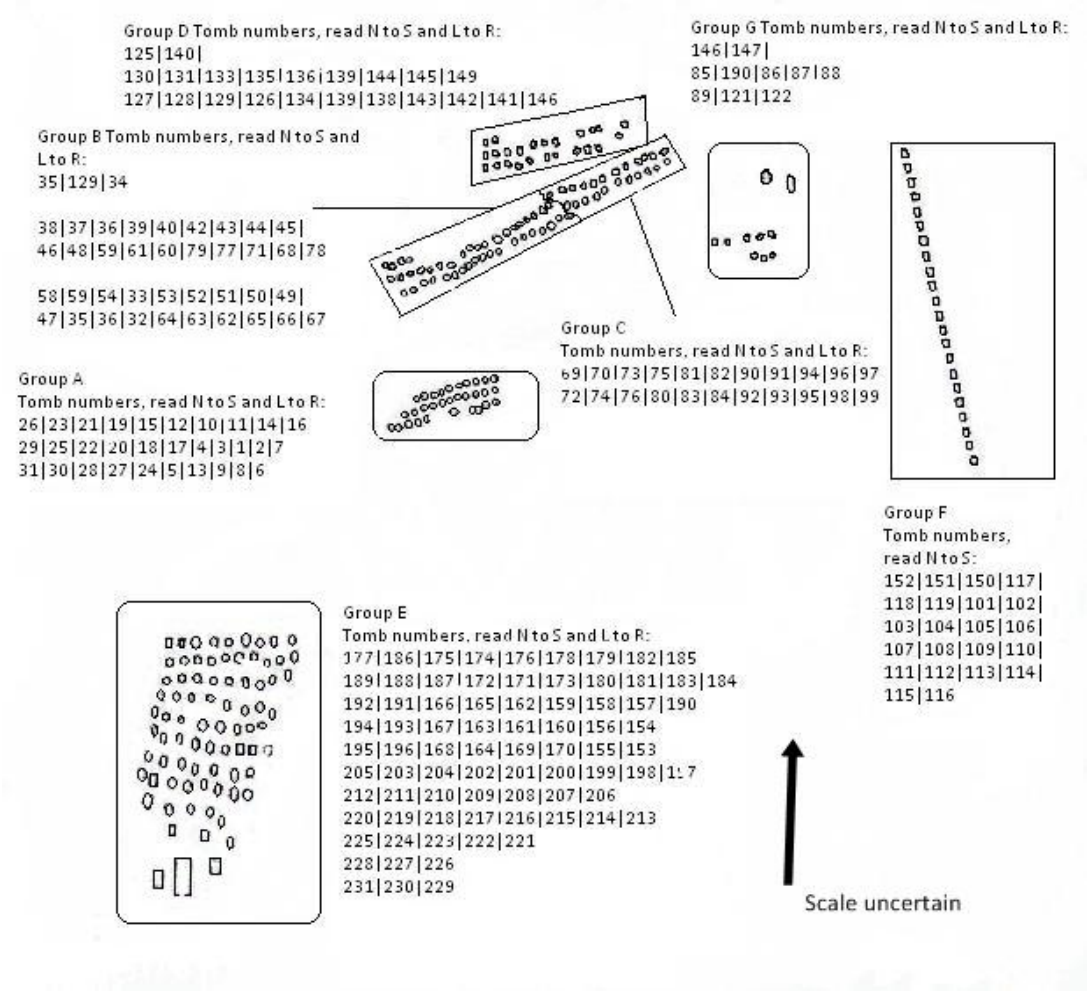
The site consists of six or seven grave groups of mostly shallow pit tombs located in the wash area of the Abusir Wadi in North Saqqara. The closest reference point visible in modern times is the Serapeum. The tomb groups are roughly aligned on a NE – SW axis, although the internal alignment is inconsistent. Some tombs in the southern part of Group E are dug farther into the substrate. Most of the tombs are unlined, with no visible superstructure. Between the shallow nature of the tombs and consistent disturbance from several decades of intense archaeological investigation of the surrounding features, little more than the location of the cemetery in general has been confirmed by geoarchaeological methods (Mathieson and Dittmer, 2007).

There are 231 tombs in Macramallah's Rectangle; 228 could be identified on the site map and therefore used for analysis. The present analysis places a small number of graves in a different position than do Morris (2008) or Kaiser (1985); grave numbers are not sequential in all parts of the cemetery, so this reconstruction is based on close examination of the hand written map and detailed grave descriptions. Unfortunately, this procedure does remove two of the three round graves from the analysis. During the late Predynastic, round graves generally marked poorer graves (Bard, 1994). Rectangular, architecturally complex, and larger graves consistently mark high status burials throughout the late Predynastic and Early Dynastic periods (Wilkinson, 1999; Bard, 2000).

The analysis of Group G is particularly affected by numbering alterations (T146 added while T100 and T148 removed). Neither Kaiser nor Morris focused on this tomb group in their analysis (except to remark on its unusual nature); this more parsimonious distribution of tombs into this group and their subsequent analysis represents the first

concerted effort to examine this group in context with the rest of the cemetery. As Group G is dated by a sealing stamp to the reign of Den (T190), its evaluation remains relevant to the cemetery as a whole. The map of Macramallah's Rectangle with the numbering used in this study can be found in Figure 4-1 below.

Figure 4-1: Macramallah's Rectangle



After Macramallah (1940)

Many studies of social status in late Predynastic and Early Dynastic cemeteries have focused on corporate groups, often competing (Ellis, 1992; Ellis, 1996; Savage, 1997). They often focus on identifying high status areas or clusters. At Macramallah's Rectangle, there is little debate concerning the identification of the highest status individuals and grave groups – the tombs to the south are much larger, more architecturally complex, and contain many more artefacts made using relatively scarce

and valuable materials. However, this interpretation is by no means the entire story of status in the First Dynasty. With the resources of a relatively decently recorded cemetery that appears to include a limited sector of the population from a short time span, it becomes possible to investigate the individual implications of status expression (Stevenson, 2009). Morris (2008) commented that the richest tombs in each grave group are located in the southernmost row. This observation is not entirely accurate. Scaled visual comparisons of tombs in each grave group facilitate a more nuanced picture of status at Macramallah's Rectangle, one that may alter the image of elite versus low status dichotomy in Egyptian society, as other studies have done for earlier and later materials, into complexity and consideration of qualitative data (Meskell, 1994; Delrue, 2001; Stevenson, 2009).

In addition to visual trend identification, the mean and median statistics reported in Chapter Three were used for status analysis at Macramallah's Rectangle. Tomb size and type frequencies, as well as burial position, artefact richness and diversity, and burial accoutrements are all strongly correlated with status in early Egypt (Petrie, 1914; Emery, 1954; Saad, 1969; Wilkinson, 1996; Wilkinson, 1999). It is important to note that these factors do not always accompany each other; that is, a tomb might be exceptional in one of these aspects, while appearing normative in other respects (Ellis, 1992; Szpakowska, 2008).

The general body of Egyptological research makes it clear that large status differences between individuals are expressed through all of these aspects in concert. Therefore, small differences, particularly within a grave group, in tomb size or richness, may indicate an attempt to display or create status differentials compared to the individual's neighbours in death or their families. Greater differences become visible largely at the inter-group level (i.e., Group E versus Group D) at Macramallah's Rectangle; and are certainly and obviously visible between Macramallah's Rectangle and any of the individuals buried in the elite tombs of the Saqqara mastaba field. As has been

mentioned in other chapters, it is worth repeating that there does *not* appear to be any central tomb at Macramallah's Rectangle.

Finally, lists of exclusions were compiled for all of the grave groups at Macramallah's Rectangle. This was used to isolate any possible occurrence of sumptuary laws (or their economic achievable equivalent) amongst the grave groups at Macramallah's Rectangle. These lists were developed to determine if there were artefacts present in the cemetery which seemed to correlate primarily to class or status. For example, Kaiser (1985) and Morris (2008) both commented on the unusual distribution of Type A and B cylinder vases, and thought that their distribution, particularly in the idiosyncratic groups of ten, might be directly associated with either time period or status. This specific case will be examined in this paper, as will Groups G and F, which present significant challenges to the status hierarchy theory of the cemetery's organization.

The analysis proceeds through each grave group in turn, discussing in detail evidence of status markers and displays within the group apparent through quantitative analysis. The tombs in each grave group are also examined from a qualitative visual perspective. Lastly, the tomb groups are compared to each other on a macro level to identify commonalities and differences between tomb groups regarding artefacts, locations, and burial accoutrements that indicate status. The resulting picture of the inhabitants of Macramallah's Rectangle is used to reflect on possible economic, social, or occupational differences between the burial groups, which aids in developing a deeper understanding of the impetus behind grave groupings in the Early Dynastic. Grave clusters in Early Egyptian cemeteries are often thought to be related almost entirely to status (Morris, 2008), or to familial or occupational ties (Stevenson, 2009).

ANALYSIS

Group A

Tomb Group A is the most centrally located of the tomb groups in Macramallah's Rectangle, and borders the central space. The group contains 31 tombs, of which 18 belong to young or adult males. Two thirds of the graves are intact. The percentage of females (22.6%) is relatively high for this cemetery. The tomb group, like most of Macramallah's Rectangle, consists almost entirely of Type A tombs, as well as some other types (B, C, and D) of smaller tombs. Few of the tombs in Group A contain significant architectural elaboration or variation; in comparison to the large and complex tombs of southern Group E, this could indicate restricted access to skilled workers.

The mean and median grave volumes are not very different; the mean is only 0.09m^3 larger than the median. Most individuals (71%) were buried in a contracted position. The next most common burial position is unknown, indicating that there was a strong preference for contracted burial, typical of the period (Saad, 1969). Of the 22 individuals with known burial accoutrements, 21 (67.7% of burials in Group A), were interred in coffins. A somewhat unique aspect of coffin burials is demonstrable in Group A; the remains of 12 coffins were sufficiently distinct to allow measurement of their length and width, and 7 of these measured 80 cm x 50 cm. Two were intact enough to record their height, and both were 35 cm tall.

This consistency may be indicative of a standardized coffin size *or* use of a specialized craftsman in making the coffins for this community. The individual may not have been employed only as a maker of coffins, but it seems likely that the task was performed regularly enough that some manufacturing in lots or following of a pattern occurred. Given the mortuary focus of the immediate surrounds and likely any nearby living quarters, this is not entirely surprising, but definitely worth noting as a potential industrial specialization in the mid First Dynasty (Bard, 2000). Coffins that fell outside of this approximate size range may have required more effort to obtain; individuals buried

in larger coffins may have employed or been gifted with custom craftsmen. Three coffins in Group B were measured at 80 cm x 50 cm, but the only recorded coffin sizes from Group E were quite a bit larger.

Grave richness and diversity is relatively high for Group A. However, the large numbers of Type B cylinder vessels may distort the statistics, as these were commonly deposited in groups, but apparently were not valuable enough to steal. The effect of the presence these vessels is readily visible in the 7-8 point difference between the mean and median richness values and their respective diversity comparators. Although Type B cylinder vessels do not occur solely in this group, and the unusual grouping of 10 occurs in 3 other tomb groups, the Type B vessel is the most identifiable feature of Group A. If any single artefact at Macramallah's Rectangle marks a corporate identity, it would be this vessel type. However, the *meaning* of this artefact is unclear, particularly given its broad distribution. The typical 3-4-3 grouping of Type B cylinder vessels is depicted in Figure 4-2, below.

Figure 4-2: Interment with Type B Cylinder Vessels

After Macramallah (1940: Tomb 27)

Two graves in Group A merit individual mention. Tomb 7 is almost twice as rich and twice as diverse as the next richest grave, a feature which implies a significant wealth and/or status difference. The individual interred in T7 was an adult male, buried in a relatively normal position (his head faced south, rather than north). T7 is located in the second row, on the far eastern side, not the southernmost row. He was buried in a more elaborate tomb, with a coffin. Unfortunately, this is one of the tombs not recorded using Macramallah's classification system, so the contents were given only brief descriptive labels. The group of 10 red-brown cylinder vessels are likely Type B. This grave also contained game pieces, personal adornments (bracelet pieces and blue faience and ostrich shell beads), and stone vessels (cups, plates, and platters). The assemblage lacks any vestige of occupational distribution. If occupational inferences were made, the most appropriate seems to be "gentleman of leisure".

By contrast, the largest and most central tomb in Group A, T5, is intact but has a richness and diversity of objects *below* the tomb group mean. T5 contains a young male in a coffin, unusually buried on the right side, but otherwise in a standard position. The coffin is larger than the previously mentioned standard (although only by 10 cm in each dimension); but the only artefacts in the tomb are ceramic jars, and no grouping of ten occurs.

Group A is, overall, relatively high in apparent status compared to Groups B, C, and D; and the situation would appear to defy Morris' (2008) assertion that the largest and most southerly tombs are highest in status. Instead, it appears more likely that Macramallah's Rectangle, particularly within groups, demonstrates different aspects of status display, which are combined or built upon each other as status differences increased. It is possible that these two individuals were relatively equal overall; but that the elder's position led to greater accumulation of wealth over time, while the younger man had achieved recognition, but had not yet developed personal or household wealth. Given T5's age, it is also possible that he had not yet fully established his own household.

There appears to be a very slight difference between the central and peripheral areas of Group A, as interior tombs are more likely to contain multiple high-value items, unaffected by row. Tombs in the eastern half are more often violated. Sex and age groups are fairly interspersed. Individuals may have been buried in family groups, but there is no evidence to prove that hypothesis. Graves more than 1 S.D. above *or* below the mean volume are in the southern two rows; one of these very small tombs contained a number of higher-value artefacts, suggesting that the smallest tombs did not belong to servants.

Membership in Group A may be related to the presence or use of type B cylinder vessels, as all but 5 of the tombs contained examples of this type. Cylinder shaped vessels are an exceedingly common find in Egyptian burials for the entirety of the Predynastic through to Old Kingdom period (Reisner, 1931), and it is difficult to suggest any particular reason for the grouping of ten. There may be an occupational origin, a standardized display of wealth, or a ritual reason for the number; but it does not appear to have been an ironclad requirement; individuals are also interred with fewer than 10 of these vessels throughout much of the cemetery.

Status in this tomb group is apparently related to tomb size, grave accoutrements, and grave goods. All of these coincide in different ways in different tombs throughout the group. Individuals may have had access to only some of these methods of status display. Other aspects of status are visible in the group in comparison to other tomb groups at Macramallah's Rectangle. Most individuals have coffins, some of which have a common size; and share a particular grave good.

Group A displays commonalities that strongly suggest the members shared important aspects of an identity. However, none of the aspects of these tombs are *entirely* unique;

that is, this group was identifiable, but the characteristics they shared were also shared with others who may or may not have been part of the group in life, but were not buried with them. Potentially, these individuals worked or lived in a particular large household that fed into the cemetery. Based on the sharing of forms and customs, it is unlikely that these individuals were part of a different cultural, geographic, or religious group from the rest of Macramallah's Rectangle.

Group B

Group B is one of the larger and more intact tomb groups at Macramallah's Rectangle. While it overlaps slightly with Group C, artefacts and physical distribution make it clear that it is appropriate to separate the two groups for analysis. The group sits north of Group A, and does not border the so-called "central space". Tombs occur primarily in two meandering lines with an abbreviated third row to the NW. There are 41 tombs in the group, of which 82.9% are intact. Most of the interred are male, although there is a high proportion (24.4%) of young males, and the most juveniles of any single tomb group at Macramallah's Rectangle. Most of the tombs are either the typical Type A (68.3%), or the slightly less elaborate Type C (17.1%).

Most individuals are buried in a standard position: contracted (73.1%), on the left side (73.1%), facing north (85.4%), and a third (34.1%) in coffins, three of which were of the apparently standard 80 cm x 50 cm size, and three larger. One individual, a juvenile aged approximately eight, was interred in a semi-extended position in a leather bag. Although this individual had few grave goods, both of the artefacts found in his tomb were stone vessels in diorite, rendering a simple interpretation as a low status burial by a poor family somewhat uncomfortable. The age of the individual seems likely to have impacted the burial decisions of the child's family. Only one individual was interred in a mat.

Tomb size means and medians for this group parallel each other relatively closely, although the standard deviation is quite high. Adult male tombs, in particular range from extremely small (0.29 m^3) to relatively large (3.11 m^3), although none could be called extravagantly sized in comparison with higher status tomb groups. Adult male tombs tend to be much larger than the other sex and age groups.

Overall, Group B tomb contents are a third as rich and half as diverse as Group A tombs on average, although females parallel their Group A counterparts more closely. Although five or six (based on assumptions regarding recording) tombs in Group B contained Type B vessels, no other artefact in the cemetery occurs in such repeated high quantities, partially accounting for decreased richness. The mean and median intact tomb richness is higher for females than for males; but three of the five male tombs of higher richness and diversity have been robbed, implying significant impact from tomb violation.

The largest and richest tomb, that of a man called IP-KA (T59), was heavily robbed and largely destroyed, making it difficult to assess how rich it might once have been. This is one of a very few tombs in the cemetery for which the owner's name is recorded. The ivory labels from T59 were identified in the Early Dynastic public display of the Cairo Museum in March, 2011; these are the only securely located materials from Macramallah's Rectangle.

The following inferences may be drawn from visual examination of Group B: violated tombs tend towards the east side of the group, while the largest variety of tomb types occurs in the western half. Tombs significantly above or below the mean volume are all concentrated to the east, in both rows, while all of the semi-extended burials are in the southern row (most of which were juveniles and young males). Most of the intact burials with no goods occur in the southern row, while there appear to be clusters of high

diversity in the northwest and the centre. Individuals with multiple stone vessels are relatively evenly distributed through the group. The intact burials without goods in the southern row make it unlikely that this row was reserved for high status burials, per Morris (2008).

This is the first tomb group in which intact tombs without burial goods occur; nine individuals were interred without artefacts; 77.8% of these belong to individuals under the age of 25. They are interred with normal positioning compared to the larger group, although only one adult male had a coffin. Strikingly, 33.3% of these tombs are under the standard deviation of grave volume for the group as a whole, and none are over. The manner of burial of these individuals suggests a genuine reflection of their probable lower status, as their tombs combine four markers of lower status in ancient Egypt: smaller tomb size, fewer goods, lack of a coffin, and physical location in lower land away from larger tombs (Saad, 1969; Wilkinson, 1996; Ellis, 1996).

Group C

Group C is located directly east of Group B, and there is slight geographical overlap between the two groups. Macramallah (1940) originally identified these as two separate groups, but most later analyses (Kaiser, 1985; Morris, 2008; Baka, 2011) merged the two together because of proximity. Both groups consist primarily of two lines of tombs, and the overlap boundary between the two lines is easily discerned. Likewise, detailed examination of the tombs themselves reveals fairly substantial differences between the two groups that certainly justify their separation in analysis.

There are 23 graves in Group C, of which 18 are intact (78.3%). Most of the tombs (78.3%) belong to males, but all age/sex categories are represented. Relative to Group B, there is an increased frequency (26.1%) of Type C tombs, but a lower diversity of tomb types. The tombs are noticeably smaller than in Group B, as the largest tomb (1.44 m^3) is less than half the size of the largest tomb in Group B (3.11 m^3). Tomb size means and medians are relatively consistent, although the low number of females and juveniles

(especially notable in comparison with Group B) restricts the meaningfulness of this comparison.

Kaiser (1985) argued that Group C may have been a later addition to the cemetery, possibly near the end of the First Dynasty. He based this conclusion largely on the presence of Type A cylinder vessels, rather than Type B. Additionally, he remarked on the increased poverty of the tombs, and their overlap in positioning relative to Group B. However, it remains equally likely that the absence of Type B vessels is related to the status or position of the individuals, as the Type A vessels never occur in groups of 10, suggesting that these vessels perform a different symbolic function than do Type B vessels.

Typical of Macramallah's Rectangle, almost all of the individuals are buried in a contracted position, which was likely essential due to the small tomb size. Most individuals (78.3%) were buried in coffins, but mats and baskets also occurred in this group. The only coffin with a documented measurement was 80 cm x 50 cm. This supports the contemporary nature of Groups A, B, and C. As noted above, Group C's burial practises are compliant with Egyptian norms of the time. In particular, the individuals in Group C are all buried with their heads to the north, while most of the other tomb groups are less consistent.

Group C displays one of the strongest visual trends in the cemetery: graves more than 1 S.D. occur in the eastern half of the group (similar to Group B), while tombs greatly below the mean occur in the western half. There were no visible age and sex concentrations. Although tombs with high or low diversity of grave goods were concentrated in the east, almost all of the violated tombs occurred in the *western* half, with four of five violations occurring in tombs that still contained more than one high-

value artefact. This suggests targeted robbery, as the eastern half was generally poorer, and also that tomb size alone did not reflect wealth.

The richest and most diverse tombs in Group C belong to a juvenile and a young male. The overall richness and diversity in this burial group is quite low, with an overall median richness of two, and the diversity at one. However, only two individuals (13%) were buried without objects; these were an adult male in the third largest tomb in the group, as well as another adult male. Both appear to have been buried in coffins, which stands in direct contrast to the larger number of individuals buried without grave goods in Group B. Potentially, these individuals or their households chose to direct limited resources towards the burial environment rather than grave goods.

Group D

Group D is the northernmost of the tomb groups at Macramallah's Rectangle, and the only group cut into by later graves. There are 23 tombs in this group; Kaiser (1985) and Morris (2008) incorporated tombs T123 and T124 into Group D. As they are not marked on the map, it is difficult to justify their statistical inclusion based solely on assigned tomb numbers. These tombs fall at the extreme end of the numbering sequence, which renders their previous inclusion problematic.

In Group D, 65.2% of tombs belong to males, 8.7% to females, and 13% each to juveniles and young males. 82.6% of the graves are intact, and most (73.9%) are the ubiquitous Type A. The other grave types (B and E) are used only for adults. Grave size means and medians track each other closely. The largest grave in Group D is only 1.44 m^3. Most individuals are buried in a contracted position, and the two semi-extended individuals are both juveniles, which suggests a link to grave size.

This is the only grave group in which more individuals are buried in mats (56.4%) than in coffins (8.7%). This is likely to be an expression of economic access; the standardization of coffin size also suggests a minimum cost threshold. To theorize a possible temporal difference between Groups C, D, and G and the rest of Macramallah's Rectangle, it would be important to account for the significant differences between Groups C and D. As it stands, Group D lies on the low end of the Macramallah's Rectangle status spectrum.

Most individuals are interred on their left side. All with known positions are buried with their heads to the north, echoing the unusually rigid compliance of Group C. The rather straggly nature of burial line organization in Group D argues against direct external supervision. Alternatively, individuals with lower status in First Dynasty Egyptian society may have hoped to offset their lack of rich or particularly well-placed burials.

The mean richness and diversity of Group D falls below one, and the median is zero. An intrusive New Kingdom kohl jar was noted, but excluded from the analysis. Given the very low rate of tomb violation, this implies that the relative poverty of Group D was significant. Interestingly, two of the four violated graves still contained grave goods, all of which were alabaster vessels. Tomb violation likely occurred within living memory of interment; as otherwise, the robbers would not have known that two not particularly large graves contained more goods than average.

All of the stone vessels in Group D were made of alabaster, likely the cheapest and most accessible option at the time because it was amongst the easiest stones to work (Mallory-Greenough, 2002). Additionally, there were no objects of personal adornment, metal, or other high-value goods. Visually, the violated tombs are all actually in the northern row, two of which were individuals buried in a semi-extended position, and all of which were male. Very large and very small graves were distributed throughout the

group, and only one large tomb was violated. Graves with artefacts cluster on either end of the group, while two thirds of the high volume tombs contained individuals without burial goods. The strongest visual trend in Group D concerns the burial accoutrements; *halfa* mats and coffins are located in the western half, while *hagnah* mats are located to the east; the implications of grass types used in mats are unclear.

All of these data argue strongly that although Group D is comprised of individuals with the same general belief patterns, artefact types, and construction technologies as other parts of the cemetery, they did not have equal access to materials. The graves are generally rather poor, and the proliferation of juveniles may suggest lower status. However, the individuals buried in Group D were still accorded individual burials in an important location. The belief in appropriate burial remained important for these people and their families. It does not seem likely that these individuals occupied highly skilled or in demand positions, nor that they were accorded positions of high respect in any local hierarchy. These individuals may have been general labourers, local peasants, or, given the relatively high number of younger individuals, in training or apprenticeship of some variety.

Group E

Group E is by far the largest tomb group at Macramallah's Rectangle. It has also been heavily destroyed by tomb robbery; and although the large tombs in the southern area of the group likely reflect higher status, the number of goods recovered from each tomb do not always match this understanding. There are a total of 78 graves, of which 3 (3.8%) are intact, all of which lie in the northern half of the group. Most individuals (65.4%) could not be assigned to a sex or age group, although adult males (29.5%), as well as small numbers of young males and a juvenile were identified. The demographics of this grave group were discussed in detail in the earlier sex and age chapter.

Most graves (84.6%) were Type A, although Group E had the largest variety of tomb types (9), most of which were represented by a single example. More of these tomb types were architecturally complex, with multiple chambers, or evidence of plastering, or superstructures, rare to non-existent in the rest of the cemetery. Tombs were also, on average, larger than the rest of the cemetery. However, this tomb group was more distorted by small numbers of very large tombs than any other group. Removing the very largest tomb, T230 (11.0 m^3) from the analysis still left a standard deviation of tomb volume of 2.02 m^3. There was 0.69 m^3 difference between the overall mean and median tomb volume. The in-group status differences between individuals interred in this tomb group is potentially greater than differences between other groups.

Where body position and grave accoutrements could be discerned, they were relatively consistent with trends in other grave groups. There may have been a slightly increased tendency towards burial in a semi-extended position, but this is likely related to the larger size of coffins in this group – all were larger than the previously mentioned 80 x 50 cm standard, although 3 were within a few centimetres of 105 x 55 cm. This feature suggests a slightly larger (and potentially more expensive) common size. All of the fabric remains were accompanied by coffins, a trait which is in line with the gradual trend towards much later and thorough mummification amongst richer Egyptians.

Diversity of artefacts is more likely to produce meaningful results in heavily robbed areas than richness, as it is less likely that a robber will take every example of an artefact type rather than a single example. Unlike many of the other tomb groups, all of the tombs without goods have been violated; and it is unlikely individuals in this group were buried without goods. That said, mean and median artefact diversity were not particularly high (intact mean 4.67, intact median 5). However, diversity strongly correlated to tomb type, with more architecturally complex (and larger) tombs having higher diversity, even though they had been robbed. It appears that the largest tombs were also the richest in the group, and that the unrobbed tombs were actually relatively

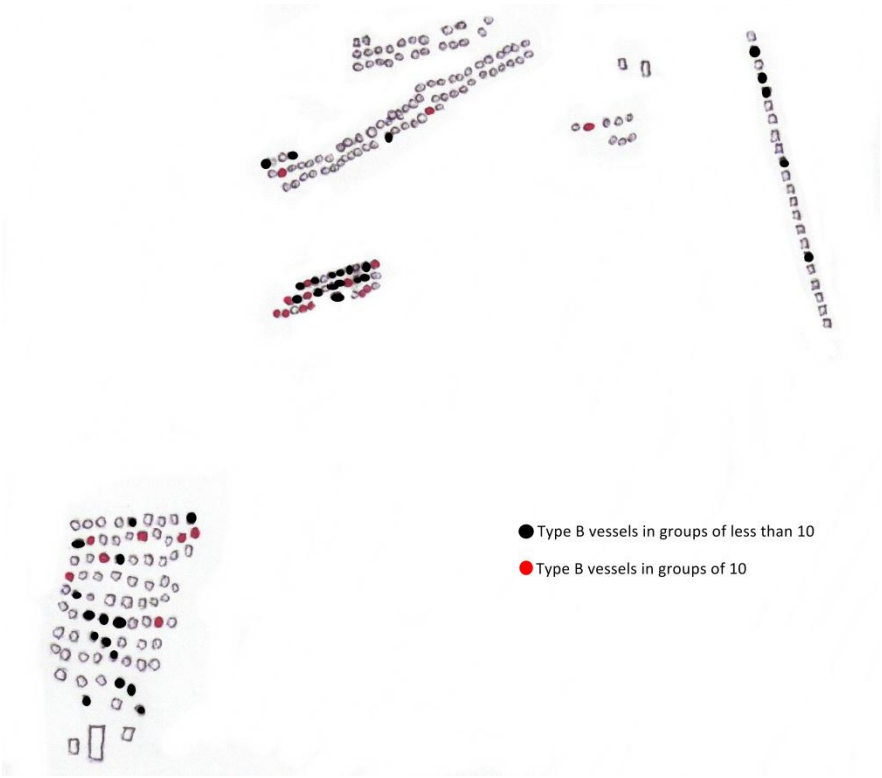
poor. In fact, the assemblages of the intact Group E tombs would not have been out of place in most of the other tomb groups, and often served similar purposes. The very common Type C vessel was likely used to store bread, based on the remnants in T210 (Macramallah, 1940).

Wealth and status displays in this grave group were very important, especially for the individuals buried in the south end of the group. Individuals buried in the north end do not appear to have been much wealthier than their counterparts in Groups A, B, F, and G. Whatever factor led to the northern individuals' inclusion in Group E does not appear to have translated into the other parts of their mortuary treatment.

The most frequent and most common artefacts in Group E are consistent with other grave groups, but there are also a high number of high-value objects. Some of these occurred in numbers inadequately represented in grave diversity comparison, such as collections of numerous stone cups (particularly St29), and some 40 ivory projectile points in T191. A large number of fragmented stone vessels were found in T230, but it appears that the tomb robbers may have consolidated their haul in T230.

Type B cylinder vessels occur in every row of this group except the southernmost. Morris (2008) observed that the groups of ten were deposited only in the northern half, but did not comment on the total distribution of this artefact type. The distribution of Type B vessels suggests that the use of these vessels was restricted to the middle-ish status portion of the cemetery's inhabitants, interred in a number of grave groups. As males, females, and juveniles are found with these vessels, an occupational link is unlikely. Please see Figure 4-3 below for Type B cylinder vessel distribution.

Figure 4-3: Type B Cylinder Vessel Distribution at Macramallah's Rectangle



Given the skeletal destruction in Group E, age/sex trends are difficult to interpret, and have previously been discussed in detail. However, tombs with artefact diversity above 5 occur throughout the group; their low numbers almost certainly reflect tomb violation. Tombs with multiple high-value goods occur in all rows except the middle row from T195 to T154. This would appear to be a result of robbery, but this row contains all of the tombs more than 1 S.D. below the trimmed mean tomb volume. Rather than moving gradually from highest to lowest wealth and status, the lowest status individuals in this group may have been buried in the centre.

Wealth and social status in Group E appears to have distinctly influenced grave inclusion and placement. Wealthier, complex, and larger tombs occur to the south, smaller and poorer tombs to the centre, and middling tombs to the north. It is difficult to assess whether this distribution was originally in distinct ranks or a gradient due to robbery.

However, the inconsistent artefact distribution, wealth, and tomb size suggest a gradient.

Group F

Group F is one of the smaller grave groups, and the most regular in size, architecture, and alignment. There are 22 tombs, all Type A, with a mean volume of 1.82 m^3 (the median is 1.81 m^3). These tombs appear more regular on the map than in the register, as the tomb volumes range between 1.08 m^3 and 2.55 m^3. Although the contents of the tombs and the bodies were almost obliterated, 5 males, a female, and a juvenile were identified by the excavator. It is possible that the predictable organization of these tombs facilitated their destruction. Alternatively, Baka (2011) suggests that they may be part of an undiscovered mastaba complex to the east. Further work in the area has found little evidence of large constructions, other than the mud brick rubble ubiquitous at Saqqara. However, it must be noted that there is sufficient use, reuse, and depth of sand in the area to render geophysical surveys somewhat unclear (Mattieson and Dittmer, 2007).

Only two individuals had a discernible position; one is buried on the left side, and one on the right. Both are buried with their heads to the north, and unusually, both were buried in a semi-extended position. This position is atypical for the cemetery as a whole, even in larger tombs, and it may suggest a characteristic particular to this grave group. The excavators noted no evidence of coffins or fabric wrappings from any tomb in this group, likely due to destruction, as coffins are common in other grave groups with similarly sized and outfitted tombs.

Richness analysis would have been entirely unreliable in Group F. However, even with universal tomb violation, mean and median artefact diversity fell above one, and the group is overall more diverse (and likely richer) than Group D. The richest tomb in the group, T110, belonged to the female. However, most of her grave goods were flint

blades, which are often deposited in multiples, and not infrequently found with females (Emery, 1954; Macramallah, 1940). In Egyptian writings, flint is often associated with doorway guardians and female goddesses, as well as funerary ritual (Graves-Brown, 2005).

Like Group E, tombs in Group F include ceramic Types B and C, but no Type A cylinder vessels. However, the most commonly occurring artefact is actually flint blades; one grave also contained a flint knife. Morris (2008) commented that the high frequency of flint blades suggested that Group F was composed of servants of the king, associated with the east side of a mastaba-type construction. However, other authors have suggested that if this group is associated with a mastaba, it would lie to the *east* of Macramallah's Rectangle (Baka, 2011). Group F also contains examples of relatively rare and likely high status artefacts such as ivory bracelets, projectile points, a copper blade, and ochre.

Stone vessels are rare in Group F, compared to the cemetery as a whole, although the degree of violation likely had an impact. Stone vessels do not appear to have been specifically targeted in other grave groups, but grave groups may not have been robbed at the same time, or by the same individuals. In fact, the high degree of destruction combined with the low frequency of stone vessels suggests that different people violated these tombs than for example, Group A or B.

The artefact assemblage suggests that the members of this group or their households could access relatively rare or expensive goods. Their tombs were not extraordinarily large or small, and their grave accoutrements are largely unknown. It is difficult to assess the status of this tomb group. However, the use of type B ceramics in combination with personal ornaments, flint artefacts, and the occasional occurrence of

rare materials such as ivory or copper suggest similarities to Group A, although the tombs are generally larger than those in Group A.

Visual trends from Group F are not particularly useful because of the group's near-total destruction. Large and small tombs are interspersed along the line, as are flint artefacts and Type B vessels. However, there may be a slight concentration of high value burial goods in the southern third of the grave line; this feature does not include stone vessels, which would be unusual if this concentration reflects a genuine trend.

Overall, the individuals in Group F were buried in a way that reflected higher status than most individuals in Macramallah's Rectangle; but do not appear to have been elite. The juvenile's presence is dissimilar to most of the subsidiary tombs excavated by Emery (1954). Although there are some architectural similarities between Group F and some of the subsidiary tombs around Saqqara mastabas, the relatively well-preserved examples from this period excavated by Emery (1954) suggest some key differences. Most of the tombs Emery excavated, whether intact or violated, included at least some evidence of coffins or wrappings. Additionally, burial in a contracted position was very much the norm. Most importantly, in T3504, T3503, and T3506, Emery found no evidence of personal ornaments such as beads and bracelets, while these occur in several Group F tombs (Emery, 1954; Grajetzki, 2003).

Group G

Group G is anomalous compared to the rest of Macramallah's Rectangle, and some researchers have chosen to largely exclude it from their analysis (Morris, 2008). However, range of variation is fundamentally important to understanding any population, whether mortuary or modern. That said, because Group G's location and construction are atypical, it is critical that all of the tombs included in the group analysis be firmly located in their proper group context; therefore T100 has not been included in

this assessment of the tomb group. Perhaps because of their oddity, the 10 tombs of Group G are mostly intact – only 3 have been violated.

The grave group contains adult males, a female, and two young males, buried in tombs of divergent sizes. Two large tombs distort the group statistics, as there is more than a cubic metre between the mean volume (1.88 m^3), and the median volume (0.65 m^3). Most tombs are Type A, with one Type E, and a larger Type J tomb. Both the largest and the smallest tomb in the group are Type A, with little in the way of architectural elaboration, even though the largest tomb, at 8.05 m^3, is substantial even in relation to Group E. Unusually, the largest tombs lie on the north side of the group, directly opposite the orientation of most of the rest of the cemetery. Also, this group contains the only multiple burial of the cemetery, a male and part of a young male in T89, which had been violated. The circumstances of this double interment are unfortunately entirely unclear.

Of the eight individuals in smaller tombs, all were in a contracted position, with their heads to the north. However, unlike much of the rest of the cemetery, individuals were buried almost equally on their left sides (40%) and on their backs (30%). Burial accoutrements were unknown in half of the graves; but the remainder were buried in mats, with only one coffin.

The female in the coffin (T87) was buried with a few stone artefacts. Her coffin was larger than the ‘standard’. However, T87 was not the richest tomb in the group; the second largest tomb (T190), a young male, includes the most artefacts, Type B cylinder vessels, and a seal of King Den, which establishes temporal continuity with the rest of the cemetery. T190 contained the only remaining ceramic vessels in the whole tomb group. No artefact type occurs in more than one tomb in Group G.

Four individuals were buried in intact tombs with no grave goods – all males, although of differing ages. All of the graves fell below the mean volume. All but one were interred in a mat. These similarities with Group D burials are strongly suggestive of a significant status differential. Burial position in Group G seems to be grouped; the three southernmost individuals are buried on their backs, and the second row on their sides.

It appears that this small grave group may contain one or several higher status individuals, and potentially a cluster of their servants or lower-status household members. However, there is no evidence of mastaba construction. The inclusion of Type B ceramics, a seal of Den, and a coffin support the dating of this group to the approximate time period of King Den. Group G cannot and should not be discounted from analysis of Macramallah's Rectangle as a whole, and the results of this analysis argue against large scale and directed cemetery purpose by the strength and uniqueness of Group G's small-scale organization. An organizational principle seems to have been applied, but likely in the absence of direct oversight.

In Table 4-1, below, the pertinent statistics for each grave group are summarized for convenience. The grave groups differ noticeably even when only a few categories are considered, but the range of variation within each group also becomes more apparent. Some statistics for Group F are noted with (V), indicating that the group was so heavily destroyed that little but scraps remained, and that statistics for intact tombs could not be calculated.

Table 4-1: Tomb Statistics by Grave Group

	Min Grave Volume (m^3)	Max Grave Volume (m^3)	Mean Grave Volume (m^3)	Median Grave Volume (m^3)	Mean Intact Diversity	Median Intact Diversity
A	0.4	2.9	0.9	0.8	3.3	2
B	0.1	3.1	0.8	0.7	1.8	1
C	0.3	1.4	0.9	0.8	1.7	1
D	0.4	1.5	0.9	0.9	0.4	0
E	1.1	16	3.5	2.8	4.7	5
F	1.1	2.6	1.8	1.8	(V)	(V)
G	0.2	8.1	1.9	0.7	1.7	0

Exclusionary Analysis

The exclusionary analysis aimed to identify sumptuary laws or access restrictions between the grave groups. Artefacts unique to a group or several groups but excluded from others could be used to construct meaningful relationship between tomb groups. Artefacts were counted by presence or absence in each tomb group, without regard to quantity. Significant patterns emerged, supporting the existence of a status continuum at Macramallah's Rectangle.

All of the grave groups other than Group G contained at least one unique artefact. Group E had 19 unique artefact occurrences, by far the highest number. Of these, eight are almost certainly associated with higher wealth and/or status, such as imported styles of ceramics, animal bone, copper, and ivory boat models and inlay pieces. Groups A, B, and F also contain a few unique artefact types each, indicative of their owner's extended access, such as ivory game pieces and labels, or copper blades. The unique artefacts in Group C and D are different types of stone artefacts; access to at least alabaster vessels appears to have been near-universal between burial groups. This

renders Morris' (2008) suggestion that Type B vessels served as an alabaster substitute uncomfortable. It should be noted that four artefact types (stone Types 11, 12, 20, and 47) were described by Macramallah but not recorded in the grave catalogue.

Some artefacts at Macramallah's Rectangle appear to have been associated with subsets of individuals holding similar status, such as the Type B cylinder vessels marking middle status, or Type A cylinder vessels indicating lower wealth or status. However, the most "elite" individuals appear to mark their status partially by burial with unique artefacts. These unique and harder to access artefacts tend: to be made of rarer or more expensive materials (ivory, copper), or materials that require greater skill and time investment to work (flint, harder stones like schist, diorite, and granite rather than alabaster, written ivory labels). They are artefacts that imply connections abroad (foreign or imitation foreign ceramics), artefacts that imply greater leisure time (game pieces), or that require resources to expend on personal appearance (beads, bracelets, necklaces, hairpins). Consistent with the general understanding of Egyptian societal life and the importance of mortuary status expression, those in smaller, less complex tombs tend to lack artefacts that make these powerful statements. A summary form of the exclusionary analysis by material is found below in Table 4-2. As above, Group F is labelled (V) where no reliable data exists.

Table 4-2: Exclusionary Analysis by Grave Group

	Coffin	Fabric	Mat	Ceramic	Import-type Ceramic	Stone	Palettes	Ivory	Bead	Copper	Flint	Wood	Animal Bone
A	Yes	Yes	No	Yes	Yes	Yes	No	Yes	Yes	No	Yes	Yes	No
B	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	No
C	Yes	Yes	Yes	Yes	No	Yes	No	Yes	No	No	Yes	No	No
D	Yes	No	Yes	Yes	No	Yes	No	No	No	No	No	No	No
E	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes
F	(V)	(V)	(V)	Yes	No	Yes	No	Yes	Yes	Yes	Yes	No	No
G	Yes	No	Yes	Yes	No	Yes	No	No	No	No	No	No	No

RESULTS

High status individuals at Macramallah's Rectangle are distinguished by factors common to high status graves across ancient Egypt and broadly accepted by researchers, including tomb size, architecture, and placement, the materials and form of grave goods, and the treatment of the body (Szpakowska, 2008). They are, however, entombed in a way distinctly poorer and smaller than the elite of Saqqara's mastabas (Macramallah, 1940). Macramallah's Rectangle, in its micro-scale, is consistent with First Dynasty Egyptian society as a whole. The increasing power of bureaucracy and the importance of status in the lives of Egyptians living near the capital during Den's reorganization may in fact have led small differences in status or wealth to be considered more important on even the individual level, and between people who could be described as social equals.

Tomb Location

The physical position of tombs within Macramallah's Rectangle was undeniably an important marker of socio-economic status. Larger tombs are accompanied by greater diversity of artefacts, and the inclusion of rare artefacts or displays of skill. Although it is obvious that some denizens of Group E were much richer than most of the rest of the cemetery, and some in Group D much poorer, the relative status of many of those in the middle remains unclear. What forces resulted in intact burials in Group E poorer than many burials in Groups A, B, F, and G remains unclear; grave wealth alone did not indicate or determine status.

The absence of central structures at Macramallah's Rectangle will be discussed at length in the following chapter. However, at a cemetery that includes no "elite" tombs of extraordinary wealth, the largest tombs in Group E are oriented towards the great mastabas of the First Dynasty. The edge of the cemetery, like the cliff edge of the Saqqara Plateau, is edged with relatively large and diverse tombs. Similarly, if the structures to the north reported by Mathieson and Dittmer (2007) are houses or workshops, then the shorter distance between this district and the poorer tombs of Group D likely reflects lesser status. In many ways, the physical organization of status at

Macramallah's Rectangle echoes the organization of the Saqqara Plateau as a whole. Finally, the south of Macramallah's Rectangle is very slightly higher in elevation, which aligns with trends observed at Tarkhan (Ellis, 1996) regarding the placement of high status tombs. However, this difference is small according to survey (Jeffreys and Tavares, 1994), and close to imperceptible on the ground.

Tomb Architecture

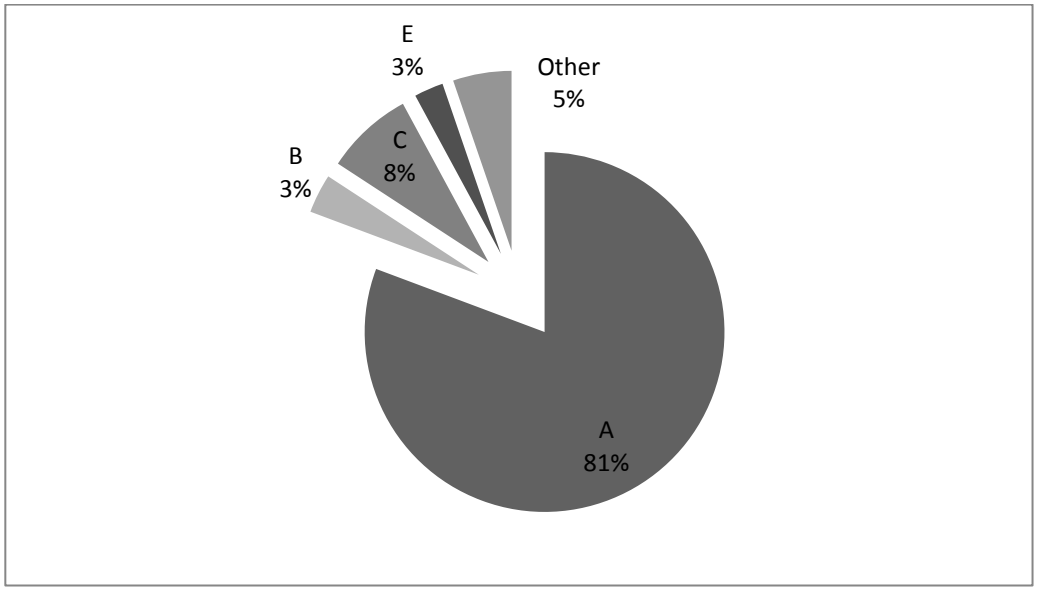
Tomb architecture at Macramallah's Rectangle distinguishes only the very highest and lowest status individuals from the majority. The most complex tombs are largely found in Group E, and are consistently located in the southernmost portion of that group; sophisticated tomb architecture acted as a marker of relatively high status. Likely only the higher status or wealthier individuals had access and means to employ workers with the skills necessary to design and construct more complicated tombs. Unique tomb architecture in other grave groups (such as Group G) is more likely to accompany large tombs.

Low status tombs, such as the very small circular and irregular tombs (Types B, E, and F), seem to have been of less interest, and were less thoroughly recorded. The assignment of several of these tombs to grave groups remains in significant doubt. Located tombs of these types belong mostly to those interred in the northern, poorer grave groups, and often to poorer individuals within those groups, or individuals in a less privileged age/sex demographic.

The very large majority of tombs in Macramallah's Rectangle follow a very standard architectural format, a simple rectangular pit with little elaboration (Types A and C). This configuration is entirely typical of non-elite First Dynasty contexts. With few exceptions, individuals at Macramallah's Rectangle did not possess the socio-economic status required to obtain a more elaborate tomb, or one located closer to the high prestige burial areas. Neither were the majority of inhabitants so abjectly poor that they received

only a cursory interment. Artefacts aside, *most* of those interred at Macramallah's Rectangle appear to have been of a similar place in society, being neither elite nor impoverished. A summary of tomb types is found below, in Figure 4-4.

Figure 4-4: Tomb Type Frequencies at Macramallah's Rectangle



Tomb Richness

At Macramallah's Rectangle, tomb richness increases with status, to a limited extent. The increase in richness is effectively capped by an accompanying increase in tomb violation in southern and higher-status areas of the cemetery. While some of the tombs in Groups E, A, and F, in particular, may once have possessed superstructures of a size and type that signalled their status to robbers, there is strong evidence that at least some of the tomb violation occurred within living memory of interment. Tomb violation patterns indicate that individuals in larger and more diversely-equipped graves were also buried with larger numbers of these goods than found by Macramallah. Otherwise, there would have been no incentive for the high amount of robbery in Groups E and F compared to Groups C and D.

Tomb Diversity

While richness analyses could not be conducted in several of the tomb groups, all of the groups were subjected to an analysis of tomb diversity. Basically, restricted distributions

of artefacts, particularly symbolically meaningful artefacts, supports the existence of either a large divide in access to some items, or *de facto* sumptuary laws prohibiting certain people from obtaining high status artefacts. The evident contrast in ability to access high-status goods between Groups E, A, and F, and the comparable poverty of Groups C and D suggests either a gap in either wealth, status, or both was present in Macramallah's Rectangle.

Certain aspects of grave good distribution argue for some variety of sumptuary control at Macramallah's Rectangle. Examples are goods that may not have been particularly expensive, or would have required only physical labour on the part of the interred individual or their family, and yet are represented in the highest-status graves but not the lowest. Specifically, the restriction of faunal remains to Group E is potentially significant. Whereas an ox or gazelle may have been beyond the reach of the "ordinary person," single joints would have been cheaper, or a bird relatively easy to catch oneself. Therefore, the exclusion of animal bone from all of the grave groups except E suggests greater significance, especially when individuals in Groups A and F were interred with copper and ivory pieces. Animals often accompanied wealthy or high status burials in the First Dynasty, and are demonstrably significant beyond their use as a food item (Bard 2000). The combination observed by Macramallah (1940) implies at least a minor difference of status as well as wealth.

The distribution of Type B cylinder vessels has already been discussed in detail in this paper. However, its restriction to the middle status band of the cemetery at least partially supports control of access to this vessel type. Additionally, as Kaiser (1985) theorized, Type A cylinder vessels seem to have signified a lower status of some type, while numerical parallels in stone vessels are largely lacking in the wealthier tombs. Type B vessels themselves do not seem to have been cheaper surrogates for a pricier item in this quantity.

Finally, beads or bead necklaces were found with a relatively small number (5) of burials, but instances of tomb violation with excavator notes regarding skull disturbance specifically (13) imply more occurrences. Because so many probable examples were stolen, it is difficult to assess the overall economic value of bead necklaces; the theft itself argues for perceived value. The exclusion of personal ornaments from the lowest status grave groups argues that perhaps these individuals occupied a niche not permitting ornament at their work, could not access even the most ordinary of ornaments, or perhaps did not believe that an individual's ornaments should accompany them in the tomb. As there is little to suggest that the lower-status individuals at Macramallah's Rectangle held differing beliefs, the latter seems an unlikely scenario.

CONCLUSION

There are multiple examples at Macramallah's Rectangle of individuals or their families using one or several aspects of mortuary status display, even in the apparent absence of the others. Other researchers (Ellis, 1992; Bard, 1994; Ellis, 1996; Savage, 1997; Savage, 2000; Delrue, 2001; Szpakowska, 2008; Stevenson, 2009; Grajetzki, 2010) have written about the different and complex ways in which status is displayed in ancient Egyptian cemeteries. The apparently conscious manipulation of different methods of status display at Macramallah's Rectangle suggests that individuals or their families, faced with limited disposable resources, chose to concentrate their displays on one or several aspects, often similar to other tombs in their tomb group. This trend, quite logically, is most obvious in the tombs of the "middle status" individuals.

For example, the people interred in Group A identified with a status associated with Type B cylinder vessels. Many individuals were able to access stone, imported, or local imitation ceramic vessels; many were able to make or purchase coffins, and some could afford to deposit ivory materials, copper, or flint blades. However, individuals were all buried in small to average sized tombs, ranging in form from circular to square.

Members of Group A often chose to display wealth through grave goods rather than through expansive architecture.

Status and the understanding thereof was clearly an important component of burial rites at Macramallah's Rectangle. An overall comparison of burials within and between the grave groups strongly supports an overall hierarchal arrangement of grave groups, and to some extent within the grave groups, largely based on tomb size and sophistication. This hierarchy would give Group E the highest in-group status, then Groups A and F (and perhaps G), followed by Group B (and perhaps G), Group C, and finally Group D.

However, when the details of each tomb are carefully examined, this overall impression breaks down into a more complex mosaic. The general idea of hierarchal tomb groups holds, based on comparisons of mean and median tomb size, wealth, and diversity. However, graves within each group sometimes exhibit greater variation than between groups, and the impact of targeted tomb robbing cannot be fully assessed. Some intact tombs in Group E are poorer than those in Group B, the central and largest tombs are occasionally poorer than some much smaller tombs, and the closeness of alignment between tombs in a group is not necessarily correlated with either wealth or poverty.

Other authors have reconsidered status construction at early Egyptian cemeteries, such as Predynastic Naga ed-Der and Early Dynastic Tarkhan. Savage (1997) theorized that distinct and competing family groups created burial clusters at Naga ed-Der, while Delrue (2001) thought the apparent clusters were largely temporal, but also related to increasing status differentiation. At Tarkhan, Ellis (1992; 1996) argued strongly that differentiations in burial location and contents argued for a gradual change in social discourse focussed on increased hierarchy in the very Early First Dynasty, specifically between two corporate groups. However, for inter-family competition to have been a

motivating factor at Macramallah's Rectangle, a large number of adult males from each family would have had to die within the span of Den's reign. Engles (1990) suggested that 12 of the 13 graves at Kafr Ghattati were from the same family, but the tombs date from Dynasty 0 through to the end of Dynasty I. However, competition between mostly unrelated workers, from estates or similar near the capital, provides a sensible solution to both organizational and numerical anomalies at Macramallah's Rectangle.

At Macramallah's Rectangle, a variety of individuals are buried whose status can be roughly equated with the non-elite, but not impoverished public (Grajetzki, 2010). This conclusion is similar to Macramallah's (1940) original suggestion. Certain individuals are on the high end of that range (the southern half of Group E), and some are on the lowest end of the range (Group D). Any individual buried in this location near the elite tombs may have held more status, or a closer position to the court, than expressed in their tomb. Although grave groups roughly reflect a status hierarchy, the relative displayed status of any given individual within a group occurs along a continuum that includes the whole cemetery.

Specific grave goods or larger-scale architecture likely reflect greater access to wealth and exotic materials, but it appears that many individuals in many grave groups had at least some access to the finer things in life. Therefore, it may be said that status at Macramallah's Rectangle is displayed through means including tomb location, tomb type, tomb size, artefact wealth, artefact diversity, and grave accoutrements; but that *all* of these factors occur in varying combinations that likely reflect differences in the priorities and assets of the interred individuals or their families within and between grave groups. This conclusion is part of the more recent trend towards the recognition of individual agency and complexity in early Egyptian cemeteries (Delrue, 2001; Szpakowska, 2008). The greater the difference in status between any two individuals, the more likely it is that multiple factors will be greatly different between their tombs. The tomb groups at Macramallah's Rectangle, while a convenient unit of analysis, do not translate directly into ranks or classes.

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Chapter Five: Discussion and Conclusions Regarding the Purpose of Macramallah's Rectangle

INTRODUCTION

Egypt's First Dynasty (DI) was a period of significant societal change, caught between the highly regionalized Predynastic and the hierarchical, comparatively unified historical narrative of the Second Dynasty and Old Kingdom. Similarly, artefacts and features from this period are often transitional between these periods in idiosyncratic ways (Petrie et al., 1913). However, little direct evidence remains of the First Dynasty. The earliest settlement layers are almost entirely buried beneath later habitation, and the vast majority of early material is mortuary (Reisner, 1931; Bard, 1994). Detailed site reports, particularly early documents, tend to focus on high status individuals and prominent archaeological features (Petrie et al., 1913; Saad, 1969; Bard, 1994; Baines and Lacovara, 2002). During the early to middle DI, written records are extremely rare; and largely confined to labels (such as those in T50 at Macramallah's Rectangle) and sealings.

While hierarchical social structures are clearly present in Egyptian Predynastic contexts, it is only during the First Dynasty that these structures become sufficiently elaborate to sustain the complex political, administrative, and religious apparatuses of the state of Egypt as scholars of later periods would recognize it. The First Dynasty Egyptian kings used a variety of means to increase their territory and trade networks, solidify their position as divine absolute rulers, and establish structures that communicated this power to their subjects (Wilkinson, 1999). Some of these means are frequently sensationalized in the public eye, such as human sacrifice. For this reason, it is critical that modern researchers making use of older research examine material with critical eyes to avoid unnecessarily sensational reactions that may detract from gaining depth and understanding of early Egyptian society and its approach to death (Albert et al., 2000). This examination includes both artefactual materials (where extant) and the early reports concerning excavations that were often not curated.

This paper re-examines reports from a First Dynasty cemetery at Saqqara known as Macramallah's Rectangle in order to investigate its original purpose. Previous researchers have often argued that this cemetery resulted from retainer sacrifice during the middle of D1, while others have stated that it fulfilled no sacrificial function. By examining the spatial organization of the cemetery, the palaeopathology and characterization of its residents, and the topography and location of the cemetery relative to other Saqqara monuments and the nearby capital at Memphis, it will be possible to clarify the original purpose of this cemetery

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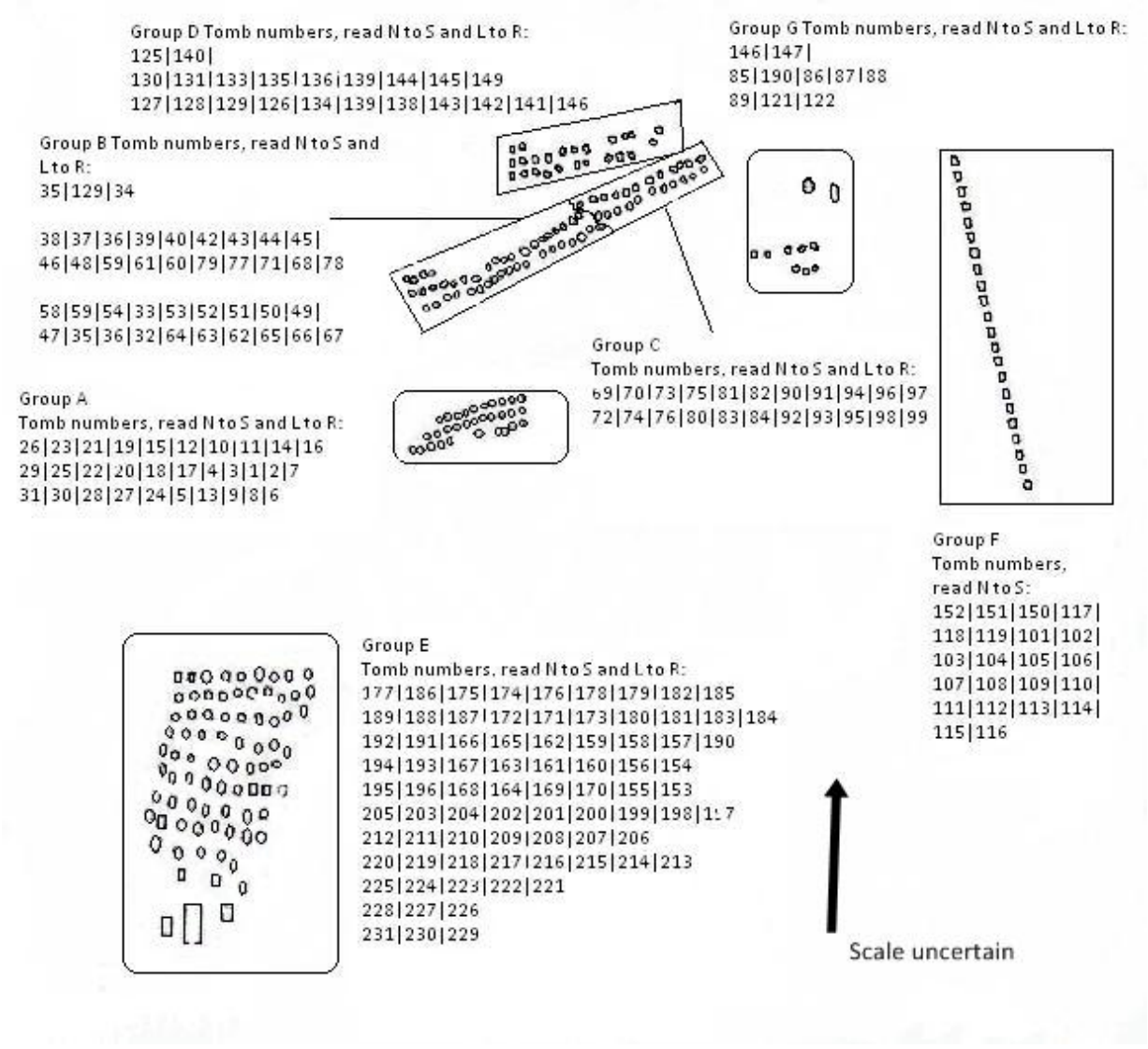
BACKGROUND AND SITE INFORMATION

Macramallah's Rectangle is a cemetery composed of 231 (one a double burial) tombs located in six clusters or groups north of the Sarapeum at Saqqara; the cemetery was discovered during the search for a suitable location for the debris pile during excavations at the Sarapeum. Coincidentally, the site is still being used for debris from excavations at the Serapeum. Excavation of the 300 x 120 m area occurred over two months, with 40 workers, in 1936 (Macramallah, 1940). The tomb groups were assigned letter designations A through G. The largest, Group E, consists of eleven rows placed to the southwest, aligned roughly north-south, tending from centre to the west. The largest graves are in the southernmost rows. Group A, the most central, consists of three distinct rows, aligned roughly north-south. These sections are the most clearly delineated of the western part of the cemetery. Figure 5-1, below, depicts Macramallah’s Rectangle with its grave groups.

Figure 5-1: Macramallah's Rectangle



After Macramallah (1940)

Groups B and C occur in two primary rows slightly to the north of Group A, and slightly differing in orientation. Kaiser (1985) and Morris (2008) grouped these together in analysis; but their overlap, orientation, and distinct material differences warrant separate analysis. Group D is the northernmost and least clearly ranked group of tombs. It consists of two primary rows, and returns to a more north-south alignment pattern. The easternmost tomb group, Group F, is highly unusual, consisting of one very strictly aligned row of similarly sized rectangular tombs, running fairly precisely north-south (Macramallah, 1940).

Between Groups B, C, and F lies the idiosyncratic Group G. It contains a small number (10 in this analysis) of tombs that may consist of three north-south rows, but reverses the trend of the rest of the cemetery by placement of the largest tombs to the north rather than the south. In addition, it occupies a central space created by the five northernmost tomb groups (A, B, C, D, and F) similar to the space lying south-east of the site as a whole. The northernmost part of the site is somewhat disrupted by New Kingdom tombs cutting into Groups C, D, and G, although only Tomb 148 appears to have been cut directly by later construction (Macramallah, 1940).

The state of preservation at Macramallah's Rectangle appears from the 1940 report to be moderate. Excavation photos show bones in apparently good condition most of the time. Unlike Tarkhan (Petrie et al., 1913) or Naga ed-Der (Lythgoe, 1965), there is no mention of preserved soft tissue, and little in the way of well-preserved organic objects. Additionally, it is likely, given the period, that there should be more frequent remains of wooden architecture, similar to Tarkhan.

Dating of the cemetery has largely been based on ceramics (Macramallah, 1940; Kaiser, 1985), although the repetition of King Den's name on a pot, sealings, and other objects situates cemetery activity in the mid DI (Macramallah, 1940). The lack of "proper" mummification supports a relatively early date, while individuals buried with their heads to the north rather than to the south, as well as mud brick revetments and storage magazines, argue in favour of DI rather than the Predynastic. Specific artefactual parallels with the contents of the tomb of Hemaka, King Den's chancellor, support this timing. Intrusive elements from overlapping New Kingdom tombs occur in some tombs, but no scholar has disputed the dating of the cemetery's founding to the reign of Den (Macramallah, 1940, Kaiser, 1985; Morris, 2008; Baka, 2011).

Macramallah (1940) dates the whole of the cemetery to the reign of Den, suggesting that the graves belong to middle class people from the vicinity of Memphis. With some

reservations, Batrawi and Morant (1947) accept Macramallah's dating. Kaiser (1985) suggests that some of the ceramics in groups B/C and D are derivative of forms in A; a smaller original cemetery dating to Den may have been filled with some later graves, although Kaiser does not definitively state that this is the case. Morris (2008) argues for a single cemetery creation event, likely occurring at or just prior to the end of the reign of Den, without later filling in of graves. This paper accepts the general dating of the cemetery to be the reign of King Den, and possibly slightly after his death. Lacking collections of identifiable artefacts or material, and given the continued disturbance of the excavation site, redating the site will not be possible. Baka (2011) suggests that Macramallah's Rectangle is part of a larger cemetery group; Macramallah (1940) indicated that a larger area of burials was possible.

Further materials are indeed lacking. A personal interview with Khaled Waheed, Chief Inspector of Saqqara as of March 1, 2011, indicated that there are no known unpublished records from this excavation; while some materials may remain in magazine storage, their origin is unidentifiable without content manifests. Similarly, the Egyptian Museum in Cairo requires a site accession number from the site records in order to track artefacts through their catalogue. However, four ivory plaques from T59 (the tomb of IP-KA) were visually identified by the author in the Early Dynastic display cases as numbers JE86172 – JE86175 as of February 28, 2011. The plaques had no specific site or excavator attribution.

INTERPRETIVE ISSUES

Some of the difficulties inherent in this data set have been discussed in earlier chapters. However, there are a number of issues which have a clear and occasionally prejudicial impact on discussion of the purpose of Macramallah's Rectangle. Duplicate tomb numbers, omitted numbers, and omitted tombs on the map exert an influence on outcomes if incorporated differently into the data set by different researchers. In particular, the relative size and perceived importance of Group G may suggest single or

multiple burial events, or the existence and usage of a “ceremonial central space”. Some researchers (Kaiser, 1985; Morris, 2008) incorporate larger or smaller numbers of graves into this group, or assigned some unlabelled tombs to particular grave groups in other areas.

The present author has not included any graves not present on the 1940 map published by Macramallah (1940). While some of the hand-drawn grave labels require decipherment, this analysis has not assigned grave numbers to any mapped features that entirely lacked numbering on the original plan. Unless there were more graves excavated than Macramallah recorded in the apparently complete, if flawed, register, not all of the unlabelled features are tombs. Not all of the grave numbers are spatially sequential. Therefore, the assignment of unmapped tombs to particular groups or unlabelled features is problematic.

Skeletal interpretive issues have contributed to a bias extending into the present. In 1947, Batrawi and Morant published a study on skull metrics from Macramallah's excavation. They accepted Macramallah's interpretation of a middle class cemetery for locals, examined the metrics from a “dynastic race” perspective, and stated that the only female skulls in the cemetery were from the 18th Dynasty. However, Macramallah clearly sexed many individuals as female in his report (Macramallah 1940). This identification was confirmed in the additional analysis presented by Derry (1940) as a chapter in that site report. It appears that Batrawi and Morant were not working with the full skeletal collections, and that the skulls they measured were male. Given the sex ratio of the cemetery, this result is likely, but the conceptual difference between few females and none at all is large in interpretative terms; and critical when examining the possible occurrence of sacrifice. Demographics are important, and the presence of women and children would be easily swamped by conflicting reports. For an example of these interpretive issues, please see Wengrow (2006: 247) or Wilkinson (1999).

INTERPRETIVE OPTIONS

To date, there have been three distinct theories proposed to explain the plan and purpose of Macramallah's Rectangle. While Macramallah made explicit comparison to the tomb of Hemaka, he made no mention of human sacrifice. He proposed that the tombs were constructed in a series before use, but contained the remains of local middle class people; and may have been part of a much larger cemetery. He was particularly interested in their social status because so many “ordinary” early cemeteries have been destroyed in some way, badly recorded, or both (Macramallah, 1940). Derry (1940) implicitly accepted this interpretation, as did Batrawi and Morant (1947). Baka (2011) also agrees with this interpretation, although he states that it is possible that there is both a large continuing cemetery and further, largely destroyed mastabas. Baka believes these individuals to have had a slightly higher social status than those at Tarkhan or Helwan.

The next person to examine Macramallah's Rectangle was Kaiser in 1985. He proposed that a sacrificial burial event associated with the funerary ritual of King Den was responsible for the creation of tomb groups A, F, E, and possibly part of B/C, with later fill-in of Groups B/C, D, and G to the end of DI. He argues that the alignment of the first grouping is a strong indication that the burials were simultaneous, while a later date could account for the misalignment and clumsier organization of the latter groups. Kaiser also argues that ceramic cylinder vessel A is a derivation of cylinder vessel B, and that such a derivation supports a temporal separation of the tomb groups. The apparently empty space between groups E, F, and A is ceremonially important in Kaiser's opinion. Kaiser’s space may have included a building, of which no trace remains, that may have been used to prepare the king's body prior to travel to Abydos (Kaiser, 1985). Swelim (1991) takes a very similar approach, although he argues for a vanished rectangular funerary enclosure in the central space.

In one of the most recent treatments of Macramallah's Rectangle, Morris (2008) argues

for the public enactment of one very large sacrificial event. She suggests that sacrificed retainers may have been stabbed or strangled. Morris also argues that the less rigidly organized groups B/C, D, and G were simply individuals who were less important at the time, and that all of the individuals buried in this cemetery were buried in a position and status commensurate with their socio-economic standing whilst alive. However, Morris posits that Den's body would have lain to the south of Group E rather than in the central space, based on the position of the largest graves in Group E.

To summarize, to this point there are three primary interpretative theories, presented here in the order in which they were proposed:

1. Cemetery composed of locals with no sacrifice;
2. Cemetery originally used for retainer sacrifice with later, probably local, fill in; or
3. Cemetery created during one simultaneous choreographed retainer sacrifice event.

These theories will be discussed within the context of spatial organization, palaeopathology, and cemetery location and topography, in order to eliminate theories from consideration. Each of these lines of inquiry will argue conclusively against a sacrificial interpretation of the original purpose of Macramallah's Rectangle.

RETAINER SACRIFICE IN EARLY EGYPT

It is fairly established that retainer sacrifice occurred during the Egyptian Early Dynastic. Evidence for sacrifice is strongest from the very late Predynastic/Dynasty 0 to the end of DI (Crubézy and Midant-Reynes, 2000), as well as the end of DI (Reisner, 1936). This was a period of unification and drastic reform that placed the king as divine and absolute ruler, literally imbued with power over life and death (Bard, 1994). Human sacrifice seems to occur most often, cross-culturally, during periods of state formation and in consolidation of ranked societies (Hoffman, 1980, Albert et al., 2000; Crubézy and Midant-Reynes, 2000). In periods dominated by competing leading families or individuals, funerary human sacrifice may serve the same purpose as competitive

feasting, in addition to re-establishing the order of the conceptual world in times of uncertainty after the deaths of chiefs or other powers by creating ritual and continuing household structures into the afterlife (Reisner, 1936; Albert et al., 2000; Morris, 2008). In this view, human sacrifice is a form of conspicuous consumption creating a visual translation of rank and power, or acting as the ticket price for these things (Albert et al., 2000). Religious, funerary, and political motives remain difficult to separate (Albert et al., 2000). The idea of sacrifices of various kinds and positions as critical for renewal and stability is perhaps particularly important in Early Egypt (Campagno, 2000).

A number of researchers argue for the Predynastic origin of sacrifice rituals involving bloodletting and bodily mutilation, particularly in simultaneous burials of multiple individuals (Albert et al., 2000). Ludes and Crubézy (2000) in particular argue for the sacrificial use of beheading at Hierakonpolis, but both beheading and throat slitting at Adaima based on skeletal markers. However, some researchers do not view signs of dismemberment as necessarily linked to sacrifice, and discuss them as separate customs relating to death and burial (Wengrow, 2006). Strangulation has also been suggested (Galvin, 2005). However, while many DI kings' funerary enclosures and tombs were surrounded with large numbers of subsidiary graves (Reisner, 1936; Emery, 1939), archaeologically verifying sacrificial death is difficult.

Subsidiary graves, whether sacrificial in origin or not, are generally thought to contain officials of the court, relatives of the king, and household servants, perhaps including a harem (Reisner, 1936). Stratigraphy, burial position, and palaeopathological evidence (Galvin, 2005) have all been used to argue for the presence of sacrifice at the tomb of Hor-Aha, a very early DI king (Emery, 1939; Galvin, 2005). In the mid-DI, subsidiary burials around kings’ tombs were dug in trenches, with a steadily decreasing number and area of graves through the dynasty (Reisner, 1936).

Albert et al. (2000) argue that sacrifice must occur in a ritualized, religious environment; if no consistent ritual is associated with sacrifice, it is not be possible for archaeologists to identify its occurrence in any given instance. They also note that, particularly for sacrificial rituals, visible remains are the least part of sacrificial behaviours. Six factors which support the presence of human sacrifice include: traces of violent death; multiple burials; hierarchal disposition of corpses; placement with or in a place of offerings; placement in sacred space; and a bias factor in the selection of the placement site (Albert et al., 2000). Albert et al. (2000) also suggest that in order to identify a particular site as sacrificial, several of the above statements must be true, and there must be similar sites and situations elsewhere in the culture.

Judd and Irish (2009) re-examined the remains of the 'corridor people' buried inside large Bronze Age mounds at Kerma. The original excavator, G.A. Reisner, had opined that the people were likely retainers who willingly accompanied the central burial into death. Judd and Irish used a three-pronged approach to evaluate if this situation resulted from human sacrifice. They tested for rates of skeletal trauma, group affinity through skull metrics, and whether the burials had followed Kerma burial custom. As all three points held true, Judd and Irish (2009) argued that the burials in the corridor belonged to local people (rather than prisoners or Egyptians), sacrificed by some means to accompany the primary burial into the afterlife.

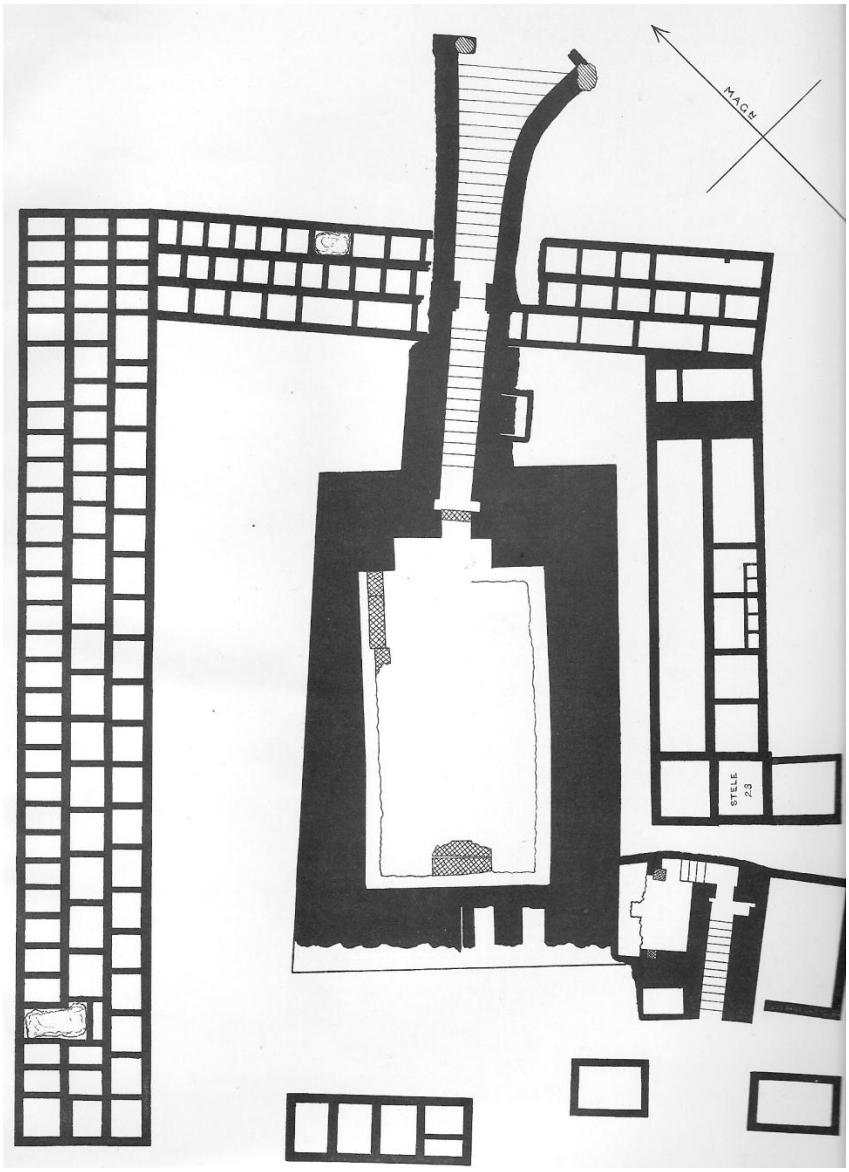
Site construction is often viewed as particularly indicative of sacrifice. Reisner (1936) argued that unless the royal tomb and subsidiary burials were clearly sealed at the same time, it remains possible that graves were simply pre-prepared or pre-planned. He also stated that trench grave construction was, in and of itself, insufficient evidence for simultaneous burial. By the reign of Den, it appears that subsidiary courtier burials and simultaneous sacrifices co-existed (Reisner, 1936; Crubézy and Midant-Reynes, 2000). Simultaneous sacrificial burials have been identified as mostly female (Zer, Reisner, 1936; Hor-Aha, Emery, 1939), and mostly male (Aha, Dreyer, 1992); but Crubezy and Midant-

Reynes (2000) emphasize individuals' young age, and that sacrifices are often associated with animal remains. They speak of the subsidiary burials ranged alongside large tombs and funerary enclosures, with stelae marking the individuals' status, although these tombs are by no means equal or identical. Kemp (1967) suggests that the Saqqara plateau and its environs were used largely for the burial of artisans; and that it is possible, although not probable, that they were all sacrificed. In the words of Crubézy and Midant-Reynes (2000), “Il rest l'irritante question de savoir combien and qui.” Determining the purpose of Macramallah’s Rectangle using its spatial organization, palaeopathology, and location thus becomes a potential window into the extent and frequency of human sacrifice in Ancient Egypt.

SPATIAL ORGANIZATION

The spatial organization and construction of Macramallah's Rectangle differentiates itself in relation to more securely identified retainer sacrifice sites. Most of the king's tombs or funerary enclosures thought to be potential sites of retainer sacrifice share common features of plan and construction. By the early to mid D1, most of these constructions were polygonal, with lines of cell-like structures including subsidiary burials and storage facilities, as well as rooms which may have served other purposes during construction and use (Reisner, 1936). While not fully square or rectangular in construction, such tomb groups do tend to follow a strikingly unified and linear plan; and show little variation in grave architecture (Reisner, 1936). This pattern is exemplified by the tomb of Den at Abydos, as drafted by Petrie (1901), seen below in Figure 5-2. Larger rooms were constructed closer to the central tomb, but all of the rooms or cells occupy an apparently simultaneous space and plan. During Den’s reign, these tombs were built in hollow rectangles at a distance from the central tomb (Reisner, 1936). Contemporary examples of mastaba tombs with subsidiary burials at Saqqara include T3504, 3503, and 3506 excavated by Emery (1954).

Figure 5-2: Tomb of King Den at Abydos



After Petrie (1901)

The subsidiary tombs around Den's tomb at Abydos, like all of the higher visible subsidiary tombs, were robbed and largely destroyed during Amélineau's exploration (Reisner, 1936). Den's mortuary monument includes three isolated tombs. There are no burial groups; all of the other tombs are arranged in blocs. The largest tomb of this group has a square area of 12 m^2, and the smallest 0.85 m^2. The graves have both square and oblong shapes (but no round or oval tombs), and the southern group is the largest. The location of Den's funerary enclosure (precursor to the valley temple) has long been a

matter of some debate (Petrie, 1901; Reisner, 1936).

Contrast these structures with Macramallah's Rectangle. The cemetery does have an overriding organizational principle. However, that principle does not consist of cell like structures, arranged on three or four sides of a significant central grave or monument, but rather, of meandering rows of graves loosely organized into groups. There are no archaeological remains other than graves. While the cemetery organization is directional, the only linear group is Group F, which is manifestly not directly connected to the orientation or structure of the remaining grave groups. There is good reason to conclude that the majority of graves were constructed and filled during the reign of King Den or shortly thereafter. However, the time span of King Den's reign, in which he celebrated two *sed* festivals over x+14+y years (Wilkinson, 1999; Kahl, 2006), means that little justifies assuming that the graves were constructed simultaneously. In fact, if all or most of the grave groups were constructed simultaneously, it is likely they would align more closely to a linear plan and orientation as seen at the elite tombs of Abydos and Saqqara. Groups E and F, nearest any theoretical central construction, do not align in orientation.

Additionally, the cemetery at Macramallah's Rectangle is fundamentally differently organized than either funerary enclosures or subsidiary tombs of the First Dynasty. Roth (1993) commented that these structures parallel Egyptian houses; all have extremely closed plans, with limited access points and multiple turns required to reach the centre. By contrast, it is possible to reach most tombs at Macramallah's Rectangle from multiple angles without more than one turn, and without running into any boundary walls. This difference in plan strongly implies that the cemetery was not constructed for the same audience as the burials around kings' tombs.

This paper has discussed authors (Kaiser, 1985, Swelim, 1991, Morris, 2008) who believe

that the cemetery organization at Macramallah's Rectangle hints at the existence of a central or frontal structure, towards which all of the graves would have been oriented. However, the cemetery exhibits no turning of focus; the largest graves do not occur on the sides of each group that would form a rectangle surrounding a central grave or feature. No trace of a central construction has ever been found (Jeffreys and Tavares, 1994; Morris, 2008; Baka, 2011), and the rubble in the area could trace to any of the numerous constructions in the area or their destruction.

Morris (2008) argued that all of the graves faced towards a central focus in front of the group; that is, the cemetery focused on a point to the south. However, Group G, which includes a grave (T190) dated by sealing to the reign of Den, is clearly oriented with its largest graves facing away from the supposed front or focus of the cemetery as a whole. In addition, Group F is aligned on the north south axis, but does not present any apparent focus in that direction. In fact, based on the previously mentioned cemetery construction principles of the first dynasty, the focus point of Group F would be either Group E, or a point between Group F and Group E, where no archaeological materials were found.

Additionally, where gaps in the rectangle of subsidiary tomb occur, they generally lie to the SW (where Group E is found) rather than to the SE (Reisner, 1936). Kaiser (1985) argues that the organization of Macramallah's Rectangle is similar to the natural accretion of graves described by Petrie (1925) as funerary enclosures. The above points regarding orientation and organization are still relevant to this argument. The Rectangle still lacks an actual rectangle or a central monument. Also, it requires particular evidence to suggest that wealthy, bureaucratic King Den (Wilkinson, 1999) had one of the least efficiently organized or permanent funerary enclosures of the First Dynasty. If these enclosures should prove the most appropriate parallel, then proving the burials sacrificial in nature remains problematic, as the use of sacrifice at funerary enclosures remains insecure.

Baka (2011) suggests that an accumulation of tombs from a larger cemetery created the visible grave groups, which were not simultaneous. As previously stated, the cemetery may have been used within a smaller timeframe than some, *without* being simultaneous. The relatively large number of closely located graves from the reign of Den would be an unusual concentration compared to Helwan or Tarkhan. However, to advance the theory of a comparatively spontaneous middle class cemetery, it is necessary to address the level of planning and alignment visible at Macramallah's Rectangle. Baka suggests simply that small earthen tumuli marking the graves would have prevented overlap. While this interpretation *may* be true, it does not go far enough. Saad (1969) states that many of the smaller graves at Helwan may not have had superstructures, and it is clear that superstructures from poorer tombs rapidly become denuded (Reisner, 1936). At Naga ed-Der, cemetery growth is organically organized in clusters (Lythgoe, 1965; Savage, 1997). At Tarkhan and Helwan, Baka's primary comparison sites, short, rough rows of tombs follow the topography and are mingled with tombs of other periods.

There is some evidence to indicate that the cemetery was constructed in at least two stages. Kaiser (1985) suggested that this construction could have occurred through to the end of the first dynasty. However, while some tomb groups come very close to overlapping, Macramallah (1940) notes only one tomb that was cut by another. Tomb 148 in Group D was cut by a New Kingdom tomb. Should superstructures have been present and then disappeared from the archaeological record, it seems likely that more of the cemetery would have been robbed unless institutional memory indicated that certain cemetery groups were unlikely to contain materials worth the effort involved in tomb violation (Baines and Lacovara, 2002). In either case, living memory was involved in the planning, use, and immediate curation of the cemetery, a situation which makes it less feasible for such use to have extended for more than a few generations, as would be necessary for graves to be constructed at the end of the first dynasty. Superstructures such as loose tumuli without reinforcing walls or plaster may well have already been blown or washed away by the end of the dynasty (Reisner, 1936).

Similarly, if the deaths of the individuals buried in Macramallah's Rectangle were entirely or mostly simultaneous, it is atypical for them to have been buried in such irregular rows with only one tomb containing more than one individual. Should a simultaneous mass burial have occurred, the orientation of Group G becomes a pressing question, as does the Group B/C overlap, and the rather inconsistent organization of the highest status tombs. Therefore, the burials in Macramallah's Rectangle were not simultaneous.

There is one explanation that does fit the available evidence. Macramallah's Rectangle is likely composed of individuals who lived in a group or identified with it, who chose or had imposed an organized plan of burial. The individuals' deaths occurred over several years or generations (such as the reign of Den), but in low frequency. Individuals died and were buried in accordance with an ordering of the cemetery determined by some authority. The occurrence of burials over a longer time span explains the wavering nature of the group grave rows, should superstructures have been nonexistent or highly fragile, while Den ruled for long enough that it is reasonable for a relatively large number of deaths to occur in any given group of people so near a large town.

The spatial organization and construction of Macramallah's Rectangle is inconsistent with the theory that it was built as a unified, single purpose site for retainer sacrifice. Only one grave group of seven illustrates the traits most commonly evident in retainer sacrifice burials, and the cemetery is still lacking the essential element of a consistent focal point. No additional structures have been found to date (Jeffreys and Tavares, 1994; Baka, 2011); and the details of the tomb group orientations are inconsistent with the existence of a major additional focus, regardless of its location. There is no indication that any of the grave construction and use was meaningfully simultaneous, and strong evidence indicating that no complete plan was available because the cemetery was frequently added to over some amount of time.

PALAEOPATHOLOGY

The palaeopathology of Macramallah's rectangle is intriguing. The palaeopathological observations made are not consistently reliable, due to the age of the work. However, the grave register notes indicate a depth of observation. Body position and the location of the head are noted in the reports, as are the following list of pathologies: a fused rib, healed finger fracture, fused vertebra, spongy and swollen tibia, and a possible elongated cranium (Macramallah, 1940). Derry (1940) does not comment on pathologies, but presents only a short summary of skull measurements. A modern physical anthropologist examining the bones would find more detailed palaeopathology and record dental findings. Unfortunately, this analysis is no longer possible; and neither is the type of group affinity analysis used by Judd and Irish (2009).

The injuries not mentioned in this list are interesting – broken long bones, stab wounds, cut vertebrae, or dental discolouration. Absence of evidence may not be conclusive, but in this instance it is certainly suggestive. Given that individuals are interred in separate graves, with no direct temporal relationship discernible between individuals, it is difficult to justify a mass death event with no evidence of any single or repeated cause of death. Judd and Irish's (2009) comparison of trauma rates would be impossible to complete. It is possible that the individuals were asphyxiated or poisoned, and no evidence of this practise remains, as may have occurred at Abydos (Garvin, 2005; Morris, 2008). However, it is logistically difficult to argue that 232 people died of a single cause and were all buried in separate graves at the same moment in time, without any trauma testifying to the cause, or other strong supporting evidence. In this case, the burden of evidence must lie upon the more extraordinary hypothesis. Most people who lived in Egypt during the First Dynasty do not appear to have been sacrificed in any type of ceremony. Therefore, without *positive* evidence implicating sacrifice in the death of these individuals, the hypothesis that the individuals interred at Macramallah's Rectangle were sacrificed is considerably weakened.

Other suggested cases of retainer sacrifice for the burial of kings from the First Dynasty include a sex imbalance in the sacrificed individuals. This may include over-representation of males (Emery, 1939), or females (Reisner, 1936; Dreyer, 1992); and is particularly apparent in burials of individuals physically close to the central focal point of the monument. Contemporary subsidiary burials at Saqqara mastabas do exhibit a preponderance of males (Emery, 1954). However, while there are more adult male burials at Macramallah's Rectangle than other sex and age groups, the remains do not directly indicate sacrifice of any *particular* status or occupational group.

A significant proportion of the individuals could not be sexed, largely due to destruction of the skeleton during grave robbery in Group E. While Morris (2008) suggests that this group would be almost entirely male, this observation cannot be stated with certainty. The skeletons from Group E that were sexable were sexed as male. However, there was also a juvenile (unsexable); and three young males were also present. The burial of the juvenile indicates that designation of this group as a military / warrior group, or even senior administrative staff, is likely inappropriate; this conclusion introduces the possibility of hereditary burial placement. Only 52.9% of the skeletons were sexable at all; this ratio is lower than the contemporary burials excavated by Emery (1954). It is entirely conceivable that one or more of the 51 unsexable skeletons was female, as females are represented in every other burial group.

The tombs themselves were so destroyed that some of the sex identifications may be questionable, given that for 93.6% of the individuals in Group E, no information whatsoever is known about their burial position, orientation, or grave environment. Sexed skeletons with any known positional element represent only 5 out of 78 graves (6.4%). Unsexable but apparently adult skeletons were the second largest discrete group within the cemetery, representing 32% of total burials. It is also likely that early methods of sex identification for skeletal remains left a sizeable margin of error. Juveniles, young adults, and older adults are represented in almost every grave group at Macramallah’s

Rectangle. Infants and toddlers are absent, but this is common in Ancient Egypt (Szpakowska, 2008). Young males represent 19.8% of all males, while young females represent 35% of all females. Given the apparent reduced frequency of females, it is difficult to assess if the superficial increase in young females as a proportion of the total is significant. Higher numbers of young females are to be expected due to deaths in childbirth. However, there is strong evidence such individuals may be buried in separate cemeteries (Baines and Lacovara, 2002; Szpakowska, 2008).

Other cemeteries such as Tarkhan demonstrated extremely high variation in proportion of sexes between very short time periods; males often significantly outnumber females (Petrie et al., 1913). In particular, the relative percentage of females and juveniles as a part of the whole is very similar to the percentage during the contemporaneous SD81 at Tarkhan; it is only the males who occur in high numbers (Petrie et al., 1913). There is no apparent concentration of females at Macramallah's Rectangle that could be argued to represent marital or other status, although it is likely that females buried in Macramallah's Rectangle had some particular commonality which made it less likely for them to be interred in a different cemetery or with children. This commonality may have been status-related. The low overall proportion of young adults (male and female) does not appear to support sacrificial burial. Crubézy and Midant-Reynes (2000) clearly state that high numbers of young adult burials, of either sex, are a criterion for robustly identifying sacrificial cemeteries.

Burials of atypical individuals are absent at Macramallah's Rectangle. In particular, dwarfs occupied a very significant place in Egyptian culture, and were frequently buried near an early king's tomb or monument, often in a position of apparent prestige (for an example, see Petrie 1901, Tomb of Qa'a). It is not known whether these individuals met a natural death. The only atypical skeletal structure noted by Macramallah (1940) features a possible skull modification, rather than any type of congenital pathology. Derry (1940) notes a small number of other pathologies, none of which is congenital in

nature. While the absence of individuals exhibiting an atypical skeletal structure is not in and of itself conclusive of the absence of sacrifice at Macramallah's Rectangle, it does argue against the cemetery being constructed and filled specifically for the purpose of accompanying King Den into the afterlife.

Only one individual in Macramallah's Rectangle can be identified by name. In contrast, more securely identified retainer sacrifice sites related to rulers often display evidence that buriers went to great lengths to communicate individual identity through inscriptions and occupationally-related grave deposits (Petrie, 1922). Subsidiary burials associated with less august personages may not include names of those who may have been sacrificed (Emery, 1954), but the size of Macramallah's Rectangle precludes attribution to some lesser noble. Most of the Macramallah's Rectangle funerary deposits are goods rather than tools. This observation suggests that the occupants of Macramallah's Rectangle may have been illiterate or had little access to scribes; or that, lacking a sacrificial and externally-purposed death, standardized expressions of individual identity may not have been perceived to be necessary.

ARCHITECTURE AND LANDSCAPE

In Early Dynastic Egypt, the size and location of funerary architecture correlates extremely strongly to status. The king's tomb represented his position as a divine being; but also his role as the maintainer of order against chaos, and intercessor with the gods (Wenke, 2009). In this way, he was the central focal point around which the court and theology was supposed to turn; and this status is reflected in the prominent and permanent monuments of various types which are associated with the kings of early Egypt (Kaiser, 1985; Baines and Lacovara, 2002; Morris, 2008). To fail to provide a king with a permanently designated burial and ceremonial place, or to subsequently vandalize a tomb, could be seen as similar to name obliteration (*damnatio memoriae)* used only against those perceived to have committed crimes, or possibly, those whose memory was no longer politically expedient (Baines and Lacovara, 2002).

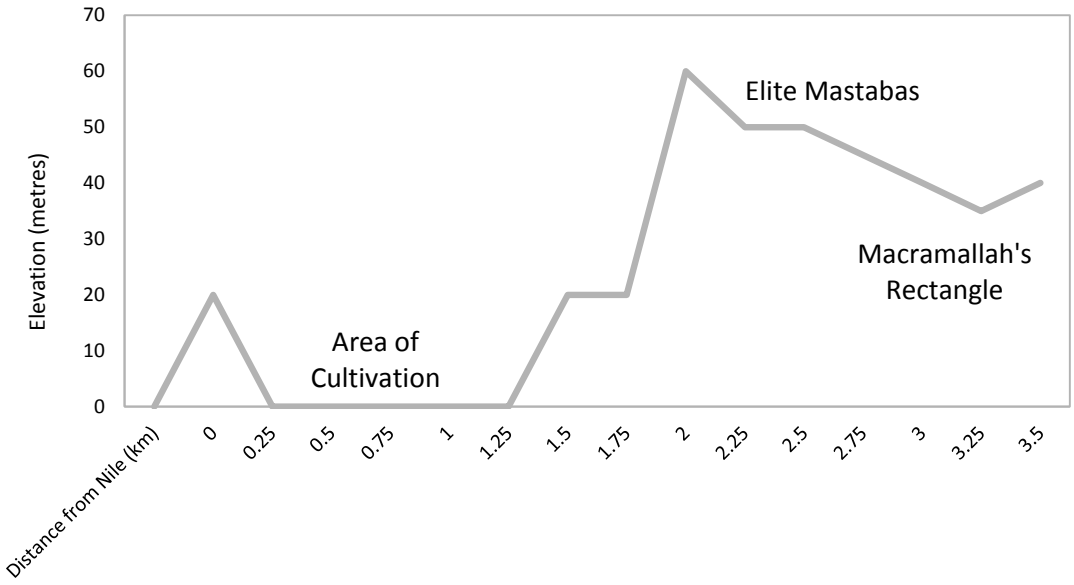
The tombs and monuments of the early rulers are placed prominently, and are generally the largest structures present in the cemetery (Reisner, 1936; Baines and Lacovara, 2002). The tombs and monuments of their nobles are placed nearby, and occasionally in a different cemetery, but show indicators of lower status such as smaller size, less architectural complexity, and fewer subsidiary burials (Reisner, 1936; Emery, 1961). The site of Saqqara was used during the First Dynasty, including during the reign of Den, for the burial of increasing numbers of nobles and officials from the royal court (Wilkinson, 1999). These tombs are aligned along the eastern ridge of the Saqqara cemetery complex, occupying a very prominent position available because the site was not yet extensively built upon.

No traces exist of a permanent central structure at Macramallah's Rectangle. If a central structure to house the king's body did exist, as suggested by Kaiser (1985) and Morris (2008), it would have to have been built in wood or a similarly perishable material, which would be far less imposing and attention demanding than the nobles' tombs along the ridge line, as well as inconsistent with the growing use of stone mortuary constructions, even for poorer individuals (Emery, 1961). This would contradict the architectural and planning customs established above. In addition, it would be odd for subsidiary burials, particularly retainer sacrifices associated with a ceremonial of the king, to be more disorganized than subsidiary burials and tomb structures associated with lower status individuals or memorials at Saqqara.

The landforms and topography of the Saqqara Plateau make it unlikely that Macramallah's Rectangle is directly associated with the funerary ritual of King Den. The elevations taken by Jeffreys and Tavares (1994) indicate that the area occupied by the six burial groups is significantly lower than the eastern ridge on which the nobles are buried. While it is not *always* the case that higher status individuals' monuments and ceremonies are associated with higher elevations the principle appears relatively consistent in this time and place, including contemporary cemeteries such as Tarkhan

(Ellis, 1996). This elevation differential creates a problem for sacrificial hypotheses (Baka, 2011). From the area of cultivation near the Nile, it is not possible to clearly see anything which occurs at Macramallah's Rectangle. In fact, the ridge and the elite mastabas block the sight of the area entirely. On the topographic maps reconstructed by Jeffreys and Tavares (1994), the elite mastabas specifically interfere with sight lines to the reconstructed site of First Dynasty Memphis. A reconstruction of the sight lines from the Nile Valley is found below, in Table 5-1. The elevations used are derived from Jeffrey and Tavares (1994).

Table 5-1: Elevation of Saqqara Escarpment from the Nile heading West



Given the modern topographical configuration, no building in the valley floor lower than three or four stories is visible from Macramallah's Rectangle, and the ridge still effectively blocks ground level line of sight to the much-expanded modern area of cultivation. Should a retainer sacrifice have occurred at the cemetery, it would not have been visible from the cultivation area, and it would have been elite members of the king's own court who prevented such visibility. Given that other locations include an elevation and increased visibility associated with the king's funeral and mortuary activity (Jeffreys and Tavares, 1994), this set up would be unusual for a retainer sacrifice. The

sacrificial event would not fulfill the dramatic ceremonial purpose described by Morris (2008).

The approach to Macramallah's Rectangle is also invisible to the average viewer. To approach the site, without benefit of modern roads, one must climb a wash valley to the north and pass through all of the smallest and poorest graves and the empty central area before reaching the larger and richer tombs of Groups E and F. Alternatively, it is possible to walk along the Saqqara plateau from the paths to the elite tombs down a slope to reach Group E and F. The location and approach is isolated, has low visibility, and in no way appears to presage the Old Kingdom transition from high visibility valley temple to high visibility monumental tomb via a smooth and relatively straight path.

In summary, suggesting that Macramallah's Rectangle was designed as a site of retainer sacrifice and burial in sight of the body of King Den means suggesting that King Den or his successor chose to make a political statement entirely incongruous with both the political position of the kings of Egypt, and with how that position was expressed symbolically and architecturally (Baines and Lacovara, 2002). As a long lived, successful king of a prosperous, expansionist period in early Egyptian history (Wilkinson, 1999), Den’s reign lacks any impetus or other evidence for this type of drastic ideological shift. It is more parsimonious to interpret Macramallah's Rectangle as a burial of lower status individuals somehow associated with the general area of Saqqara, placed distantly from the elite mastabas because they were not competing with them. During the First Dynasty, the entirety of the plateau may not have been reserved for the elite, lacking the extreme crowding of monuments that occurred later in the Old Kingdom. Based on the topographical composition of the plateau, these individuals may not have been considered to have been buried on the elevated elite area at all at the time of their interment. The perceived limits of the Plateau may have been more restricted; and Macramallah’s Rectangle the result of cemetery expansion, similar to the crowding at Helwan across the river.

MORTUARY TREATMENT AND BURIAL GOODS

While the cemetery at Macramallah's Rectangle may appear to be a very specific and segregated male-dominated hierarchical social structure replicated and sacrificed for the king, the more plausible interpretation is not so cut and dried. In most artefact categories, no specific item differentiates the 'highest status' groups from others. Rather, an extremely small number of artefact types occur many times without much reference to group location, or age and sex, while a larger number of artefacts are unique to a very small number of individuals. This distribution indicates that while wealth and status differentials are clearly present at Macramallah's Rectangle, the non-geographical distinctions between tomb groups are fluid. In addition, the specific deposition of groups of ten type B cylinder jars does not appear to be replicated at any contemporary cemetery. The occurrence of this configuration in four of seven burial groups would appear to indicate that this deposit represents a meaningful unifying factor for this cemetery.

Intact graves from Group E, co-occurring with the largest, richest, and most elaborate tombs, are distinctly poorer in grave goods than some robbed tombs from Group A. The largest and southernmost of the Group E tombs are demonstrably richer and more architecturally complex than other tombs in the cemetery; and there are more simple graves without goods in other groups, including Group A. Burial without any goods is atypical of subsidiary burials (Emery, 1952). However, between these extremities, wealth and access to luxury goods occurs not evenly, but with gradations rather than in distinct categories.

The impression of exclusivity in Group E is created through only a few exceptional tombs; all but the southernmost two rows of tombs are very similar in type, size, and what could be discerned of grave goods to tombs occurring in other groups, particularly Groups A and F. The increase in variety of stone types in Group E vessels supports greater wealth than the softer alabaster more common in the poorer grave groups

(Reisner, 1931). There are very few instances of individuals demonstrating high status through the accumulation of multiples of the same artefacts (save for the above-mentioned jars. The community that created Macramallah's Rectangle placed evident value on the acquisition of unique goods that their neighbours did not have.

Tombs were endowed with unique artefacts to indicate wealth and status, in combination with larger tombs or higher quantities of standardized grave goods (Bard, 1994). Occupational indicators are few – minimal paint, few weapons or tools, and only single stone model boats. There are 43 artefact types that occur in only one tomb group in Macramallah's Rectangle, of a total of 104 artefact categories. However, these unique occurrences, while not evenly distributed, occur in all groups. The highest occurrence of artefact types is in Group E (19 unique artefact types), but almost all grave groups contained at least one unique artefact type. The average number of unique occurrences is 6.14 per tomb group. Therefore, a community conducting successive burial ceremonies with families known to each other, and with similar base resources, best explains the type of competition and status marking visible at Macramallah's Rectangle.

While a small number of these unique artefacts may have a specialized function, they rarely occur at a high frequency within the group, making it difficult to suggest a unified group function which would explain their presence. These potentially specialized items may also simply be luxury versions of relatively common things, such as ivory and copper objects, which are a common indicator of higher status (Reisner, 1931). In fact, most of the unique artefact occurrences are unusual types of ceramic and stone vessels, although the brief descriptions in Macramallah's report render most comparison impossible, as his categories do not correlate exactly with other systems he references (Reisner, 1931; Baka, 2011). It is particularly striking, given Crubézy and Midant-Reynes' (2000) analysis of sacrificial burials in Predynastic and Early Dynastic Egypt, how very few of the burials at Macramallah's Rectangle contained animal bones.

Although personal ornaments are relatively uncommon at Macramallah's Rectangle (6 occurrences), ornaments do not occur at all in subsidiary tombs of mastabas T3506, T3503, and T3504 (Petrie et al., 1913; Emery, 1954), while they are relatively common at Tarkhan and other non-sacrificial contexts (Ellis, 1996). However, unlike Macramallah's Rectangle, none of the intact subsidiary burials from these mastabas are without grave goods of some variety (Macramallah, 1940; Emery, 1954). The existence of burials with and without goods, as individuals, in simple pit tombs including oval and round tombs, is more similar to the cemetery at Helwan (Saad, 1969). Helwan is thought to have been the major burial ground for Memphis, but not likely sacrificial, although parts of the cemetery consisted of servants buried surrounding a higher-status individual (Saad, 1969).

The gradient of tomb construction, size, and artefacts in Macramallah's Rectangle demonstrates that while wealth and power differences between individuals buried in the cemetery are clearly present, they are not so great as to suggest drastically different statuses, with the exception of the southernmost row of Group E. For example, it is not likely that a discrete and localized occupational group was present. A lack of large numbers of occupationally-specific artefacts such as models (occurs twice), paints (only on artefacts), or weapons (occurs in four graves) supports this conclusion. It appears that the individuals buried in Macramallah's Rectangle represent a relatively even gradient of lower to middle status individuals of the First Dynasty. Wengrow (2006:246) specifically refers to Macramallah's Rectangle as, "231 small graves arranged in linear groups." It is possible that T230 represents a mastaba almost entirely denuded of superstructure. However, the graves near it do not appear to function subsidiary to the tomb.

Access to unique artefact types appears generally to increase with tomb size and complexity, and general organization of the grave group. Given the location of Macramallah's Rectangle near what are undoubtedly elite tombs of the same era, it is

possible that individuals were buried with unique artefacts in order to aggrandize their wealth and appear higher in status and closer to the nobles whom they may have been emulating. Provincial leaders emulated the great tombs of the capital region (Reisner, 1931; Reisner, 1936). Efforts to increase perceived status in particular and potentially competing burial groups have been observed at Predynastic and Early Dynastic cemeteries (Bard, 1994; Ellis, 1996; Savage, 1997).

The potential influence of the nobles' mastabas upon the creation of the Macramallah's Rectangle should not be underestimated. It is entirely possible that by living and working near the highly linear structures of the elites whose mastabas occupy the Saqqara ridge line, the individuals who planned Macramallah's Rectangle were influenced by architecture and trends that would not have affected their plans had they been working farther away from Memphis. Examples of this imitation are seen in the largest tomb of Group E (T230), which contains chambers similar to the great tombs (Reisner, 1936).

Of the criteria for identifying sacrifice created by Albert et al., (2000) and mentioned earlier, the majority are not met by the evidence at Macramallah’s Rectangle. There are no concurrent examples of large scale human sacrifice in Early Dynastic Egypt without the presence of a royal or noble burial. This paper has discussed the lack of signs of violent death, as well as the lack of multiple, simultaneous burial. Hierarchal disposition of burials is somewhat normalized in Egypt during this time; and the structures present at Macramallah’s Rectangle appear to indicate ongoing, rather than momentary, supervision.

Of the criteria raised by Judd and Irish (2009), it is not possible to evaluate two (rates of trauma and group affinity). The last criterion, the cultural affiliation of burial rites, is somewhat problematic. In the case of the Kerma mound that Judd and Irish investigated, a direct physical relationship with the body of the deceased elite was present. Given that

presence, their criteria produce interesting and meaningful results. However, lacking the ability to prove two of these points, the third is weakened. The individuals at Macramallah's Rectangle do, in fact, largely follow the cultural rite of non-elite First Dynasty burial, in all its slightly changeable form. However, any equivalent cemetery, lacking a sacrificial origin, would also fit into the cultural rites associated with First Dynasty Egyptian cemeteries.

Many of the individuals are in fact interred without offerings, and are not in a location that specifically supports the interpretation of the bodies themselves as offerings without related monumental architecture. Finally, factors relating to the site selection have been discussed above. In a period of cemetery crowding and new cemetery establishment (Ellis, 1996; Wilkinson 1996; Baka, 2011), it is difficult to justify the conclusion that an isolated, lower-elevation, northerly, and largely invisible cemetery was constructed north of the elite tombs because the wash valley was particularly sacred in comparison to the rest of the Saqqara Plateau.

CONCLUSION

In summary, the spatial organization of Macramallah's rectangle, the sex distribution, and lack of palaeopathological markers, and the location of the cemetery relative to other tombs in the area all argue strongly against the deliberate construction and use of Macramallah's Rectangle as a retainer sacrifice event. The almost universal use of individual burial and gradient of artefacts, wealth, and apparent status exhibited support creation of the cemetery through a different process, over a relatively short but not simultaneous lifespan.

Little is known of First Dynasty Memphis and its surrounds (Jeffreys and Tavares, 1994; Bard 2000), making it difficult to thoroughly investigate these alternative processes. Some deductions can be made from the material and reports provided. The artefactual

evidence and location of the cemetery lead to the conclusion that the individuals interred were from the capital or its surrounds. Most individuals do not appear to have been extremely high in social status, by comparison with the artefacts and architecture with which nobles' tombs of a similar period are equipped, or even the tombs or nobles' retainers in subsidiary burials. Finally, the provision of tombs, coffins, and grave goods argues that individuals were not often in a precarious socio-economic position, and were occasionally able to obtain luxury goods. Whether though ordinary goods redistribution or through other means, some individuals had access to materials sealed with the king's seal. No particular occupation is evident in the artefactual evidence.

From these data, I suggest three scenarios that could possibly have resulted in the creation of Macramallah's Rectangle:

1. The individuals interred could represent household or estate workers of a temple or noble in the Memphis area, which may account for the gradient of wealth and existence of a cemetery plan;
2. The cemetery may have been constructed as the burial grounds of an outlying village, partially attempting to emulate burials of richer and higher status denizens of the capital; or
3. Macramallah's Rectangle may in fact be comprised of lesser retainers of King Den who died during and immediately after his long reign, but were *not* sacrificed. This would account for the organization of the burials, and the location. Den's extension of the bureaucratic network of Egypt may have led to a larger group of lower status retainers than would normally have been buried at his tomb and burial enclosures.

All of these scenarios are plausible explanations for the characteristics exhibited by Macramallah's Rectangle, and more parsimonious than retainer sacrifice in this situation. While it would be extraordinarily difficult to discern the actual processes leading to the creation of Macramallah's Rectangle, retainer sacrifice can have had no part in its creation.

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