Current Research in Egyptology 2017

Proceedings of the Eighteenth Annual Symposium

University of Naples, “L’Orientale” 3–6 May 2017

edited by

Ilaria Incordino, Stefania Mainieri,
Elena D’Itria, Maria Diletta Pubblico,
Francesco Michele Rega, Anna Salsano

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Linen shroud, 2nd century AD, Thebes
Acquarulo Canettoli collection, Inv. no 133.159, MANN
Photographs by courtesy of the Ministero dei Beni e delle Attività Culturali e del Turismo -Museo Archeologico Nazionale di Napoli (MANN)

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Introduction

The eighteenth edition of Current Research in Egyptology (CRE) conference has been held at the University of Naples "L'Orientale" on the 3rd-6th of May, 2017. It was the first time that this international event of exceptional relevance has been hosted in Italy, and in Naples in particular, which made us all very glad and proud. About 122 international scholars from all over the world gathered in Naples to attend three contemporary sessions of poster and papers, focused on a very large variety of topics (Graeco-Roman and Byzantine Egypt, Nubian Studies, Language and Texts, Art and Architecture, Religion and Cult, Field Projects, Museums and Archives, Material Culture, Mummies and Coffins, Society, Technologies applied to Egyptology, Environment). For the success of this event we certainly have to thank the exceptional generosity of the University of Naples "L'Orientale" ([http://www.unior.it/>) and its Interdipartimental Centre for Archaeological Services (CISA; <http://www.unior.it/ateneo/231/1/cisa-centro-interdipartimentale-di-servizi-di-archeologia.html>), in the person of our Dean, Prof. Edda Morlicchio, prof. Michele Bernardini (Head of the Asia, Africa and Mediterranean Department), Prof. Bruno Genito and Dr. Andrea D'Andrea (CISA President and Technical Director respectively) for their support. In particular, three travel bursaries and 10 inscription and dinner bursaries for CRE delegates have been made available, since this year for the first time ever the Egypt Exploration Society (EES) did not provide its traditional support to CRE, due to the decision of the Trustees to reduce expenditure until a new strategic plan has been developed. Nontheless, we have been able to offer to CRE Naples delegates also a free guided tour of the Oriental Museum Umberto Scerrato (University of Naples "L'Orientale", <http://museorientale.unior.it/>), a free access to the National Archaeological Museum of Naples, in order to visit the newly re-opened Egyptian Collection, and also guided tours to the archaeological site of Pompei and the Marine Protected Area "Gaiola underwater Park". The partecipants had the chance to attend seven keynote presentation, held by Italian egyptologists and Nubian and Roman Archaeologists (Rosanna Pirelli, Andrea Manzo, Irene Bragantini from Naples University "L'Orientale", Marilina Betrò from Pisa University, Patrizia Piacentini from Milan University, Christian Greco from Turin Egyptian Museum and Daniela Picchi from Archaeological Museum of Bologna), whom we would like to thank very much for provinding us very interesting lectures.

This conference would not be possible without the enthusiastic and passionate work of all the CRE Organizing Commettee members (Stefania Mainieri, Valentina Perna, Luigi Fabrizio, Maria Diletta Pubblico, Elena D'Itria, Anna Salsano, Francesco Michele Rega, Eleonora Minucci, Alessia Cesaro, Pietro Fusco, Serena Monaco and Daniela Moxedano - Pummy) who have devoted their time and energy for the good outcome of this event

Last, but not least, since all the Neapolitan Egyptologists nowadays come, directly or indirectly, from the school of Prof. Claudio Barocas, who inaugurated the teaching of Egyptology and Coptic language and literature in Naples in the early Seventies, we would like to pay homage to him with the publication of CRE 2017 Naples proceedings.

Ilaria Incordino

Recent Archaeological Discoveries in Aba Island – Sudan

Ahmed Hussein Abdelrahman Adam

Introduction

In the context of archaeological surveys that have been undertaken in most provinces and in various regions of Sudan, to survey and record the archaeological sites and include them in the archaeological map of Sudan, and in order to preserve the intangible and material culture of the area, the researcher conducted an archaeological survey on Aba Island during two seasons. The first season was carried out in July 2013 for 12 days, but then stopped as a result of heavy rains in the region, which was one of the obstacles to the fieldwork during that period. Work was then resumed in December 2016; the results were very interesting owing to the high prevalence and richness of sites discovered.

This paper presents results of the archaeological work thus undertaken and of the oral histories collected as an interdisciplinary methodology that emphasizes many applications of Ethnographical science, oral history, and strategies for fieldwork and collaboration among experts. In this article, the research philosophies and methods are presented and their application illustrated with results from the survey. Field survey in the northwestern Aba Island identified a host of Stone Ages and Historical Periods objects and thought likely to date, based on currently available evidence, to the transition between the Neolithic and the Meroitic periods to the twentieth century. The historical development of the sites are discovered in the northern Aba Island, is examined in detail to demonstrate the interpretive potential of data collected by these methods. This can be used as a working hypothesis for future research in the area.

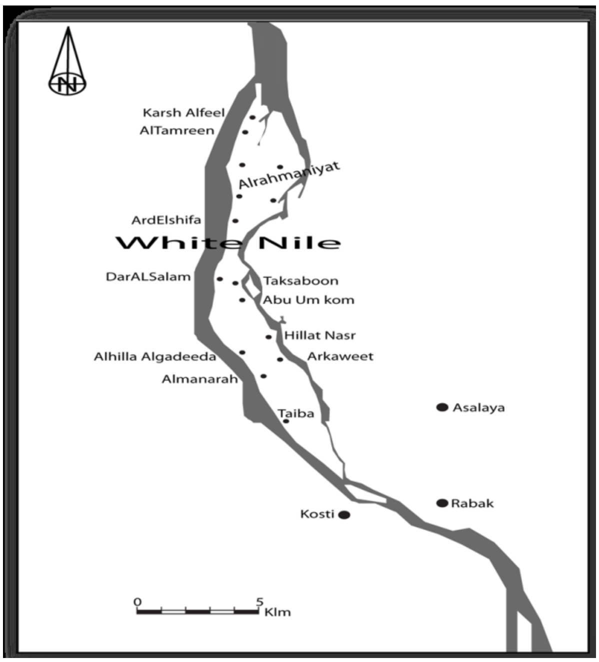

Figure 1. The Archaeological Sites discovered in the area (Season 1, 2).

The geographical location of Aba Island

Aba is an island near the right bank of the White Nile about 300km south of Khartoum (Fig.1). The island is about 54km in length from north to south, and 8km wide from east to west. It is situated between the main White Nile in the west and el-Gasir1 in the east. It was the core of the Mahdia's revolution in Sudan and the spiritual base of the Umma Party. This area includes several villages and small districts stretching from the north to the south.

This area geologically is part of the clay terrace of the western bank of the White Nile. There are many archaeological sites related to Sudanese civilization starting from Neolithic up to Islamic were registered around the town by researcher in 2015 (Adam 2015). All were mapped by two measured bearings standing on the opposite bank. Some sites were large mounds, obviously settlements and could be workshop, in many cases with cemeteries connected to them at the lowest levels.

Objectives, Strategy and Methodology of the Research

The researcher expects to uncover evidence that may shed new light on the environment and life ways of the people who inhabited the area. The research aims to combine the knowledge and techniques from a variety of disciplines to develop a more complete picture of the past inhabitants of the area, both elite and commoner, as well as to investigate the Paleo environmental condition in the past.

The strategy of the survey mainly was to walk although sometimes a vehicle was used, since the total area to be covered was substantial and the whole area was to be surveyed. The team used the scientific method that is appropriate for this type of archaeological work, which also helps to achieve the desired results and objectives.

During this survey the region was divided into three sections: north, central and south area, in order to facilitate and organize the work, as we recorded in these seasons a total of 7 sites which revealed the depth, perhaps it is important to note here that we need to complete the archaeological survey in the area on the west bank to set the island in its context. To date the survey was limited to the island which complemented the three seasons already carried out by Khider Eisa far from this area which were in 1997, 1999 and 2001 on the east bank (Eisa 2002). The work was conducted from north to south, with the first sites discovered and recorded being at the northern limit of the island.

The aim of this paper is not to present an analytic study of the subject as much as to throw some light on a long forgotten area of the White Nile by using it as an example for the threat facing archaeological sites in the Sudan. One of the most dangerous problems causing great damage to the antiquities is the lack of co-ordination between various governmental administrations and departments for the protection of the national heritage. The best example of this problem could be the new roads in the area beside the extend of the new buildings in the Island. Numerous sites were used as quarries for the soil needed to build the pavement until today. Among the most badly affected by such activity is the site of Tamreen North. The material consisted of pottery sherds, lithic tools, and even a complete bowl, most probably of a Meroitic and Post-Meroitic (350 BC –500 AD).

Archaeological survey work

Aba is the largest island on the White Nile and the private property of the Mahdi’s family, Despite its archaeological richness Aba Island has received very little attention, as the history of scientific archaeological research in Aba Island is a relatively recent development. Research dates back to 1982 when Mahmoud Eltayeb (1996) conducted limited excavations in the northeast area of Aba Island. Similarly, other rescue excavations were carried out in Aljaser located in the eastern part of the island in 1983, It was visited for the first time by the Antiquities Service when a school teacher from the north part of Aba Island informed the Service about finding a human skeleton associated with a quantity of ostrich egg-shell beads, while preparing to install water-pipes in his house in the area of Rahmaniyah which situated on a slope of a huge ancient mound. The walls of the recent houses contain many pottery sherds, fragments of bones and snail shells, along the streets for newly introduced main water-pipes partial skeletons and fragments of human bones could be seen in clear greyish archaeological layer. Here also it seems that the cemetery is located at a lower level than the settlement especially Aradeib, Doweih site (Fig. 2). The pottery found at the site is very similar to the brushed ware of Kawa site 80 klm North Aba Island (Fig. 3).

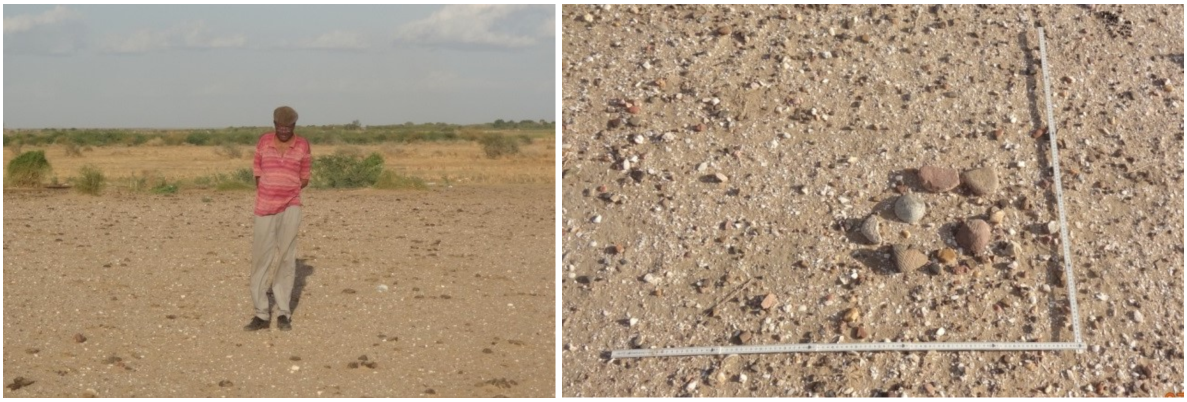

Figure 2. General view of Aradeib, Doweih site from the West.

Figure 3. Pottery sherds from the area.

Since then, random archaeological work was conducted in the area, beginning with the current author in 2012 and 2016. Unfortunately, little was done during the earlier surveys/test excavations, and most of the work focused on describing the sites and surface finds. Moreover, the data gained from these surveys was not enough to give a clear picture of the cultural history of the region in question. Archaeological research during this period was basically survey-oriented, and not unexpectedly, classifications based on surface stratigraphic evidence occupied a central position in the scheme of things. This research orientation was intended to give insights into sequences of events and chronologies. It is important to note that apart from the fact that these archaeological works were scattered (*i.e.,* few and far between), there were no well formulated strategies and/or research designs aimed at clarifying our understanding of the spatial dimension of the culture(s) being studied at both the intra- and inter-site levels.

The sites consist of different archaeological materials that belong to different time periods from the Neolithic to the Meroitic. Most of the sites discovered in Area are completely covered by shells, stone tools (Fig. 4), grinding stones and hammers. Human bones were also found, but the skeletons were destroyed. There are many pottery sherds on the surface, dominated by red and brown examples; most bearing different types of decoration with numerous shapes and sizes belonging to the Neolithic period.

Charred animal bones and fish remains were also noted on the surface. However, a large part of the archaeological sites have been destroyed by local residents through digging and taking soil to use for constructing new buildings and to grow tall plants. However, when looking in the area of Aba Island from the surface, all of the sites feature only desolate, low-lying mounds with scatterings of artifacts, including lithic tools and fragments of pottery that hint that something was here in antiquity. Indeed, lateral-oriented activities involving mapping and survey and some test pits were not considered vital to the operationalization of research work until 2015. Some of the concomitant effects of this development are as follows: artifacts collected from the area appear to remain isolated, without any significant connections between them and a given geographical configuration, thus making it impossible to recreate the extent to which a people had exploited the resources within their environment. Establishment of the nature and pattern(s) of the north area's relations among the peoples in different parts of the island in prehistoric and historic periods remains to be done.

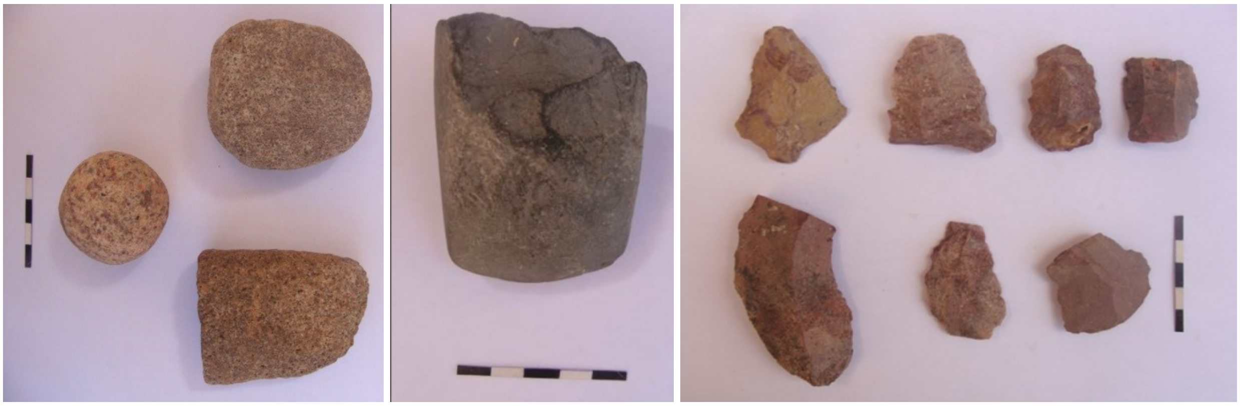

Figure 4. Hand axe and lithic tools discovered in Aba Island 15/2016.

A preliminary analysis of the samples

Pottery

The most important items amongst the pottery samples found were those pieces decorated with stripes, vertical or crossed, corrugated, and painted black or dark brown or red. These are very similar to examples that have been found in areas of central Sudan and along the White Nile, where the pottery exhibits typical local features of the Neolithic and Meroitic in the White Nile area. Other examples are similar to Meroitic pottery, but these are relatively few compared with the Neolithic pottery. However, the final identification of the Aba Island pottery samples depends on the completion of the study of other samples on the eastern and western bank of the White Nile and comparison with other pottery samples in the Sudan National Museum in Khartoum and from other similar sites.

Figure 5. Raw material spread extensively in the north of Aba Island.

Stone tools

Many lithic tools and raw material were found on the island, and some grinding stones, especially upper ones, and other completely irregular stone tools. In addition, a large number of polished stone axes have been found, the original function of which we cannot determine. The use of different types of stone was noted, some of which was not available in the region, which means that it was brought from a distance perhaps in the form of raw material (Fig. 5), for the manufacture of the tools. One of the island sites appears to be a large workshop raising the possibility that the raw materials were brought from outside, but the manufacturing process took place locally (i.e. on the island). It probably came through exchange; while we cannot deny or confirm the existence of contacts between the White Nile and remote areas outside its borders, we can currently see that there were some relationships with local areas such as the site of Altomat Mount, Kosti and others.

Other materials

The other finds obtained during the fieldwork are small kohl stick (Fig. 6), snails and shells in diverse forms and sizes, which are scattered over most locations with many ancient remains of animal bones (Fig. 7). This may be due to the proximity of the Nile, and to the presence of ponds and pools of rain-water in the area. These represent the most important source of nutrition for people who lived near the river banks and water bodies during earlier periods and are still used as food in some parts of the study area, apart from the existence of some small pieces which were used for ornaments. Also found were accessories or tools made of ivory, including one incomplete piece similar to that used among many tribes in the region, particularly the Shilluk.

Figure 6. Kind of pottery from the site.

Figure 7. Ancient remains of animal bones from the site.

Conclusion

The result was very important as we have discovered some aspects of the Neolithic and Meroitic culture such as the pottery and beads in a far area from the basic center of Meroe, in addition to the Neolithic pottery are well known in the area which will be a basic for the archaeological study of the area in the future.

Many archaeological sites in the area are mostly interrupted by the new buildings and the soil diggers, therefore, we concentrated the survey in the threatened area in the north, the most important one among others, the surface of which is covered with a density of pot-sherds with varied decorations, and some complete destroyed pottery vessels (by local soil diggers), disturbed animal bones, and various types of stone tools (polished hand axes, upper and lower grinder stone …), such as the handmade decorated pottery sherds similar to Meroitic ones, while others resemble the Neolithic, and various types of beads most probably Medieval.

Scientific studies of settlement archaeology of different parts of Aba Island face a number of problems ranging in nature from inadequate facilities to lack of archaeological work in the area. Up to now, no well-equipped dating laboratory is available in Sudan to process materials, and samples collected from archaeological work have to be sent abroad for processing. This delays the rate at which archaeological information is put into its proper time perspective.

Also, it seems that a great deal more time and attention is paid to the later phases of human settlement history than the earlier period. Consequently, much more is known of prehistoric settlements in Aba Island and the White Nile as a whole. A considerable amount of work has been done for these phases on the eastern bank of the White Nile. One reason for this interest in the later phase seems to rest in the fact that there is a meeting point between historic settlement archaeology and oral traditions for the region generally, and the fact that people can identify much more easily with this phase because it is more recent and by this fact closer to our time.

Despite the nature of the soil chemistry (acidic soil) lithic tools are still better preserved than organic objects. But there are some problems in the ancient settlements buildings, because of the different building materials as well as techniques of construction as most of these buildings are constructed over the archaeological sites in the area.

Development in recent years have shown that these problems are now being solved by indigenous archaeologists. For example, abundant oral tradition and ethnographic resources in the whole White Nile State are being profitably harnessed.

This is with the view to clarify our understanding of aspects of the people and their archaeological settlement in Aba Island. Archaeological work confirms the richness of the island through the ages. The existence of pottery and grinding stones indicates that the area has in the past had conditions suitable for the practice of agriculture with the production of food, and intensive stable human occupations at least since the Neolithic (3000 BC) to the Meroitic period (AD 200) and beyond.

Therefore, much more archeological work and analysis need to be done before interpretations and conclusions can be drawn of the exact date of the settlements in the area. However, we will continue and take more samples for the specialists to examine and to determine the exact date and history of the island.

Acknowledgements

The researcher would like to thank all people of Aba Island for their kind help in collecting material from archaeological sites especially Hatim Mahdi Harbi (guide and car driver) Salah Ibrahim Ahmed (Historian) Sabir Arbab (Anthropologist). This shows that the situation for archaeological activities in Sudan and the far region need to be supported in order to improve this difficult situation in the future.

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Livelihood activities and food tradition in Kushite Nubia

Marco Baldi

Introduction

This paper will offer a preliminary account of an ongoing research on food regime in Ancient Nubia, with particular attention to the Napatan-Meroitic period. This work has been being developed through a multidisciplinary approach that considers archaeological, archaeometrical, epigraphic and iconographic sources, and takes into account food in a very wide sense: it was daily nourishment, obviously, but had a primary role also in social and ritual occasions.

Strabo (XVII.2.2) affirms that so-called Island of Meroe, actual Keraba and Butana, was inhabited partly by nomads, partly by hunters, partly by farmers. The pre-eminence of specific livelihood activities, and their making in the different territories of the kingdom, are debated matters, nevertheless research has been confirming the Strabo's words and showing that the heterogeneous situation he describes can be extended to other areas of Nubia. Kushite food regime resulted from encounter and a long compromise between local customs and traditions of civilizations with which Nubian world came into contact.

In this context a relevant starting point is work of David Edwards (1996; 2003) and Randi Haaland (2006; 2007; 2009; 2012), who traced routes of Nubian food in pre-Kushite times and was recently enriched by Jeremy Pope (2013). According to them, food traditions as known for Napatan-Meroitic land resulted from a millenary adaptation process that could harmonize customs of two different areas: Sub-Saharian Africa and Near East. Sub-Saharian tradition is characterised by boiling or steaming in pots a variety of porridges made from summer crops such as sorghum and millets, while in Near East a variety of bread cakes made from winter crops, such as emmer wheat and barley, are baked in the hearth and oven. In both areas the same cereals were employed for making beer as well. Nubia, particularly between the Second and Fourth Cataracts of the Nile, was zone of transition and reciprocal acculturation, where external customs were assimilated and elaborated according to the local natural conditions.

The reign of sorghum

The first aspect that must be stressed in a study on Nubian food regime is the absolute pre-eminence of summer crops, especially sorghum but also millet. They had a relevant role in pre-Kushite times and preserved a great importance under Napatan-Meroitic kingdom that however brought to Kush new crops and foodstuff towards a greater diversification of local diet.

Cultivations took mainly place, obviously, close to the Nile, as well as on rivers as Atbara, and to a lesser extent in the *widan*. The high banks of the Nile made hard the exploitation of its waters; hydraulic devices as *shaduf* and *saqia* were therefore introduced.

The consumption of ground wild sorghum and other vegetables supplementing aquatic resources was recognized in seventh-sixth millennia BCE layers in Butana in sites as Abu Darbein, El Damer and Aneibis (Haaland 1995; 1999; Magid 1995). Nevertheless, the typical African food system based mainly on porridge and beer emerged during the fourth millennium BCE, when cultivation of morphologically wild sorghum was hypothetically first practised in the area of Khartoum (Haaland 2006, 174). In the context of a sedentary lifestyle, that is suggested by the great dimensions of the sites, the large number of grindstones may indicate that the inhabitants were cultivating sorghum, and the sorghum's use as temper in coeval pottery may be another evidence (Stemler 1990; Haaland 1995). However, other scholars, as Krzyzaniak (1991) and Neumann (2003), argue instead that the material indicates sophisticated foraging and that cultivation occurred several thousand years later.

Analyses of human bone collagen have shown that during the second millennium BCE sorghum and millet were regularly eaten by people at Kerma at the Third Cataract (Thompson *et al.* 2008), and remains of cultivated sorghum dated to the same period were brought to light at the boundaries of the Nubian world at Mahal Teglinos, in the eastern Sudanese region of Kassala (Beldados and Costantini 2011). According to Randi Haaland, this highlights that in Nubian territories the first important step in the emergence of agriculture was thus cultivation, not domestication: 'Cultivation is a socio-economic process that constitutes the selection pressures affecting the biological process leading to the evolution from wild to domesticated sorghum' (Haaland 2013, 174).

The regular consumption of sorghum in the form of porridge is reported by Strabo (XVII, 1) and is archeologically attested throughout the Meroitic kingdom. The domestication of sorghum had spread, although the exact moment of its introduction is debated. Domesticated sorghum could appear have been appeared under Napatans (for samples from Kawa dated between eighth and fifth centuries BCE see Fuller 2004b, note 1) and widely diffused in early Meroitic phases (for third-first centuries BCE examples from Umm Muri see Fuller 2004a, Fig. 6); other scholars dated its occurrence in the Meroitic period (Clark and Stemler 1975; Rowley-Conwy *et al.* 1999).

The Meroites conferred to sorghum a pre-eminent role in a ritual context. The offering of sorghum heads by gods to members of the royal family is a known occurrence: it is depicted for example in the western wall of the Lion temple of Naga, built by co-regents Natakamani and Amanitore in the second half of the first century CE (Welsby 1996, Fig. 69), and in a rock relief at Gebel Qeili, carved under their successor Sorkror (Welsby 1996, Fig. 68). Sorghum leaves decorated column drums of temples in Naga (Temple N200: Wildung 2011, Fig. 141) and Abu Erteila (Fig. 1), as well as ceramic wares as grave goods in the Berber cemetery, especially plates for libations (Bashir and David 2011, 127). Upside-down sorghum bouquets were deposited at the cultic site of Qasr Ibrim in a ritual of unclear nature (Plumley 1970, Pl. XXIIIa-b; Rowley-Conwy 1989, 134).

Figure 1. Abu Erteila, Temple K 1000, Column drum decorated by sorghum leaves. 1st century CE (After Fantusati *et al.* 2015, Fig. 5).

The several values of beverages

Moreover sorghum, as well as millet, was used to make beer, whose local production is reported by Strabo. It was substantially different from the modern beer: it was a dense opaque liquid, a sort of mildly alcoholic and highly nutritious soup. Ethnographic and literary sources suggest that it was very similar to *merissa*, a sorghum-based fermented beverage spread in present Sudan (Vantini 1975; Edwards 1996, 68).

The consumption of beer acquired already in Kushite times the importance in communal life that is well-known for the subsequent course of the African history (Edwards 1996; 2003; Haaland 2007). The social value of the beer containers can be very hypothetically suggested from a graffito on a wall of the Great

Enclosure at Musawwarat es-Sufra, showing two men drinking with straws from a narrow-necked globular vessel (Hintze 1979, 140-141, Fig. 16) (Fig. 2), that resembles the beer-pots still popular in modern Sudan and other African countries (Bentley and Crowfoot 1924; Crowfoot 1925; Edwards 1996, 71; Haaland 2007, Fig. 1). Furthermore, the communal consumption of beer in a cult context may be confirmed by large amounts of bowl- and cup-potsherds noticed on hilltops in the area of Meroe; they were usually associated with other ceramic material and burnt animal bones, probably remains of ritual banquets after which wares were deliberately broken (Lenoble 1997).

Figure 2. Musawwarat es-Sufra, Graffito in Great Enclosure (© Musawwarat Graffiti Archive, <http://musawwaratgraffiti.mpiwg-berlin.mpg.de/index_html>).

The consumption of beer was confirmed by archaeometrical analyses on containers and human bones of adult and child skeletons (Nelson *et al.* 2010). In addition to the nutritional value, analyses of skeletal remains from the Argin cemetery in Lower Nubia, dated between Late Meroitic and X-Group periods, revealed that the local beer contained tetracycline, an antibiotic substance which might explain the absence of infections in the examined corpses. Tetracycline is produced by the bacterium Streptomyces that contaminated sorghum in storage containers (Bassett *et al.* 1980).

The wine consumption is well-known for Nubia. The availability of imported wine was recognized already from the third millennium BCE in Egyptian and Palestinian amphorae found in limited contexts, mainly royal burials, and clearly associated with the élite (Valbelle 2004; Haaland 2012, 335). In the Meroitic epoch the Dionysos' cult spread throughout the kingdom, and vine branch became a common decoration (Fig. 3), suggesting the use of wine in a religious and funerary context.

Most of wine was imported from north (Hofmann 1991). Egypt was the main provenance but trade with other territories is also known: an amphora from the northern cemetery of Meroe bears the mark of a Roman production centre placed in present Algeria (Kendall 1982, 45).

Figure 3. Wad ben Naga, Palace, Decorative frieze. Faïence. 1st century CE (After Sackho-Autissier 2010, cat. 271).

Furthermore, different sources suggest an indigenous production in several periods of the Nubian history, but was always limited by unsuitable local conditions. In pre-Napatan times, in its decree of Nauri Sethi the first makes a cryptic reference to Kushite vine-growers (Griffith 1927, 201 l. 39). During the Twenty-Fifth dynasty, in a text at Kawa Taharqa reports a local production (Macadam 1949, 36, Pl. 12, ll. 20-21), and a supposed wine-press was observed at the site (Macadam 1955, 220).

For the Late Meroitic period wine presses were found at Lower Nubian sites, e.g. at Meinarti (Adams 1966). The only Kushite 'tavern' is at Qasr Ibrim where a rectangular building of six interconnecting rooms was associated with thousands of fragments of amphorae and goblets. The lower part of two external walls is made from well dressed stonework, two blocks of which bear carvings of a wine amphora and a bunch of grapes. The interpretation of this structure is uncertain; if its nature of tavern is accepted, it may indicate that the consumption of the locally made wine was not limited to the élite.

Archaeobotanical remains of grapevine (*Vitis vinifera*) are known for the Late Meroitic layers at Arminna West (Fuller 1999) and Qasr Ibrim itself (Clapham and Rowley-Conwy 2007, 161).

The heterogeneous external influxes: the diffusion of bread

The Kushite kingdom, that unified heterogeneous territories, consolidated the complex of economic and food customs resulted from the encounter between indigenous traditions and foreign influxes on the Nubian world.

The symbol of this process was the diffusion of bread from Egypt and Near East. Main evidences of its consumption in daily diet were recognized in centres south of Aswan close to the ancient boundary between Egypt and Nubia: first century houses of ash-Shaukhan yielded the only Meroitic domestic ovens that were certainly used for cooking bread (Jacquet 1971, 126); chemical analyses on third-fifth centuries skeletons from Wadi Qitna revealed the consumption of unleavened salty bread, and specimens of this bread, that was produced with wheat flour, were found in burials (Jambor *et al.* 1998; Němečková 1973).

In some cases the consumption of bread was also inferred from dental abrasion, seen as the results of grain-based food (Armelagos 1969; Rudney and Greene 1982; Armelagos *et al.* 1984; Martin *et al.* 1984; Buckley et al 2014); it was noted in petrographical analyses that it was in fact caused by quartz grains included in sand that helped the grinding of cereals (Anderson and Salah Mohamed Ahmed 2010, 57).

Furthermore, in Kush bread was often eaten during no well-known rituals; most of bread moulds were brought to light at Amun temples, but it is unclear whether only this deity was honoured with such offerings. Bread was offered to the god and likely eaten, by priests or specifically designated persons. Bread ceramic moulds have been discovered at several temple sites, among which, from north to south, Dukki-gel (Bonnet 2005, 233-234; Bonnet *et al.* 1999, 74; Ruffieux 2005, 259), Tabo (*Jacquet-Gordon 1981, 21)*, Kawa (Macadam 1955, 210, 215, 224, l. 33), Sanam (Macadam 1955, 210), Jebel Barkal (Dunham 19870, 95-96, Fig. 57), Dangeil (Anderson and Salah Mohammed Ahmed 2006; Anderson *et al.* 2007) (Fig. 4), Meroe (Robertson and Hill 2004, 121, pls. IId, IIIb), and Naga (Wildung *et al.* 2011, 106-107, Abb. 134). Dukki-gel (Bonnet 2005, 233-234, figs. 13-14; Bonnet *et al.* 1999, 74; Ruffieux 2005, 259) and Tabo (*Jacquet-Gordon 1981, 21)* yielded also ovens associated with granaries and water jars.

Figure 4. Dangeil, Bread mould. Ceramic. 1st century CE (After Anderson *et al.* 2007, Pl. 6).

The Kushite bread-moulds are conical in shape with a rounded or pointed end; they cannot be compared exactly with known Egyptian examples, but might be a local version of the type E in the classification of Helen Jacquet-Gordon (1981, 20-21, Fig. 6). In this sense, although no Kushite conical breads have been found, their aspect can be inferred by a New Kingdom specimen of unknown provenance, now preserved at the Museum of Fine Arts in Boston (accession number 72.4757c).

The case of Dangeil is particularly significant about the regular consumption of bread in a ritual context, as the excavators estimated the finding of over one million of mould-sherds in the temple area. Archaebotonical remains on ceramic fragments, grindings and soil revealed that Dangeil bread was made with sorghum that was used also as temper in temple bricks (Anderson *et al.* 2012, 76). Charred grains confirmed that sorghum was domesticated and not wild (Anderson *et al.* 2007).

In a funerary context, bread moulds were found in Kushite burials in the Dongola region (Welsby 2011, 29, 130-131, 148-150, 276), whereas hand-made round breads from barley and emmer wheat were preserved in fourth century tombs at Mirgissa (Adams 2004, 130, Pl. 24e), and are likely remains of funerary banquets. Similar rounded breads were depicted on offering tables, spread throughout the kingdom (Anderson *et al.* 2006, col. Pl. XLII; Welsby 1996, Fig. 33).

A world of crops

Nevertheless, in the Kushite times the enrichment and differentiation of the local food regime is mainly due to the introduction of new crops in addition to the traditional cultivation of sorghum and millet. Skeletons also reveal the common use of cereals and vegetal fibres in the local diet (e.g. at Sedeinga: Janot *et al.* 1994).

Archaeobotanical study of remains from funerary and domestic contexts of several sites allows a preliminary reconstruction of the coeval agricultural economy. Napatans introduced new crops that was known from coeval Egypt. Emmer wheat (*Triticum dicoccum*) was common, and particularly barley (*Hordeum volgare*) spread widely across the kingdom as attested by several findings at Qasr Ibrim (Clapham and Rowley-Conwy 2007, 159; Palmer *et al.* 2009, 1-7), Kerma (Bonnet and Salah Mohamed Ahmed 1984, 35), Kawa (Fuller 2004b, 70), and Meroe (Shinnie 1974, 259). An important change that occurred in the Late Meroitic period, with particular reference to Lower Nubia, is the shift towards two new species of genus Triticum: hard wheat (*Triticum durum*) and bread wheat (*Triticum aestivum*) (Rowley-Conwy 1989, 135). The seasonality in Late Meroitic diet has been confirmed in a preliminary way by Lower Nubian skeletons: the analyses of tissues, bones, teeth and hair have revealed the consumption of wheat, barley in winter, and sorghum and millet in summer; more fruit and vegetables were consumed in winter (White and Schwarcz 1994; White *et al.* 2004; Schwarcz and White 2004).

In fact, additional evidence indicates a range of new fruits and legumes. Among legumes, lentil (*Lens culinaris*) would be first appeared in Napatan Kawa (Fuller 2004b, 73) and spread widely under Meroites (Rowley-Conwy 1989, 135), that brought to Kush lupin (*Lupinus albus*) (Fuller 2004b, 70; Clapham and Rowley-Conwy 2007, 161), pea (*Pisum sativum*) (Clapham and Rowley-Conwy 2007, 161), hyacinth bean (*Lablab purpureus*) (Clapham and Rowley-Conwy 2007, 162), and cowpea (*Vigna unguiculata*) (Fuller 2004a, 11). Among fruit, particular attention was devoted to dates (*Phoenix dactylifera*) and doum palm (*Hyphaene thebaica*); date lipids have been found found in fourth-sixth century cooking pottery from Qasr Ibrim (Copley *et al.* 2001a; 2001b). Lipid analyses indicate that Nubians at Qasr Ibrim were processing dates in the same manner in Kushite epoch. These palms, especially dates, can survive in a dry climate if abundantly sprayed, and are therefore suitable to Egyptian and Nubian territories. In addition to archaeobotanical remains, their common occurrence in Nubia is reported by Strabo (XVII, 2, 2)

Recent ethnographic observations showed that dates can be eaten by itself or mixed with another foodstuff, especially barley (Treloar 2010, 18). The sugars can be extracted by the boiling of the whole fruit to produce a syrup which could then be either added to food or to beer (Copley *et al.* 2010b, 542). A distinctly Nubian traditional beverage is made from the fermentation of the dates themselves (Dirar 1993, 280-90); a second fermentation step of the date extracts is also known and produces a date liquor (Beadnell 1909; Murray *et al.* 2000, 602). (Copley *et al.* 2010b, 542).

In a recent past date palms were one of the main crops in northern Sudan, and large quantities of fruits were exported to Egypt; it is unknown whether such a trade was practised in antiquity, but the high religious value recognized to date finds an evidence in a stele erected at Gebel Barkal by Napatan king Harsyotef, who celebrates the planting of six date palms in Meroe and Napata honouring Amun (FHN II, n. 78 ll- 134-135).

Meat and fish supply

Furthermore, the meat consumption was a common occurrence throughout Kush, integrating vegetables in daily diet. For the Meroitic period different study cases can be considered. In the Wadi Halfa area tissues of naturally mummified corpses revealed a greater consumption of meat by men of the community (White and Schwarz 1994, 176; White *et al.* 2004, 244). Analyses of skeletons from cemetery in Sai yielded the image of a generally healthy peopling, whose diet was rich in iron and proteins (Le Bailly and Bouche 2006); archaeological findings confirmed that it was a rich community (Francigny 2014). A food regime mostly based on animal products can be equally recognized in some human groups at Geili (Coppa and Palmieri 1988).

The 'Table of the Sun' referred to by Herodotus (III, 17-19, 23), wherein cooked meat and milk were reputed to be placed on a table every night, then consumed during the day by the populace or those passing by, may have been part of a cult. However, the 'Table of the Sun', that was placed around the cities, could easily have been a myth or misinterpreted in some fashion by Herodotus as his account is not based upon first-hand knowledge.

Hunting is clearly attested by animal bones and graffiti in Musawwarat es-Sufra (Hofmann and Tomandl 1987), nevertheless the requirements of meat was mainly provided by domestication (Fig. 5), as suggested by analyses of bones. Domestic animals are more attested than wild ones with the exception of bones brought to light at Meroe and Dangeil, which show an unusual pre-eminence of hunting (Chaix 2010, 520). Generally speaking, herbivorous animal appear to have been a prevalent amount in daily diet (e.g. White and Schwarz 1994, 180); bovines were more exploited than goats and sheep (Chaix 2010; for Meroe: Carter and Foley 1980; Churcher 2003; for Abu Erteila: Fantusati 2013, 231–32). Butchery of cattle is confirmed by various marks corresponding to different operations from skinning to meat consumption (Chaix 2010, 522). Moreover, the consumption of poultry can be suggested looking at food offerings in royal funerary reliefs, and at a skeleton of a chicken that was found in a fifth century burial in Qasr Ibrim (Macdonald and Edwards 1993).

Strabo (XVII, 2, 2) and Diodorus (II, 8, 6) report that cheese, butter, tallow and blood were part of local diet, but we have no evidences about the consumption of secondary animal products in addition to milk. The latter had a pre-eminent role in Kushite rituals (Yellin 1982), but its use in daily diet is unclear.

On the contrary fish consumption has a few evidences, although the Nile might be thought as a relevant source. This may be due to the hard preservation of bones of many fishes, but also an alleged prohibition needs to be considered; a passage from a Piankhy's stela in the Amun temple in Gebel Barkal reads: "[…] they were […] fish-eaters, and this is an abomination to the royal residence" (FHN I, no. 9 l. 151). Among the rare findings, remains of Nile perch were found at Meroe (Carter and Foley 1980, 303), whereas the house of a Napatan craftsman in Dukki-gel yielded jars containing fish bones and sauce (Chaix 1992); actual comparisons have identified them with remains of *tirkeen*, a local dish.

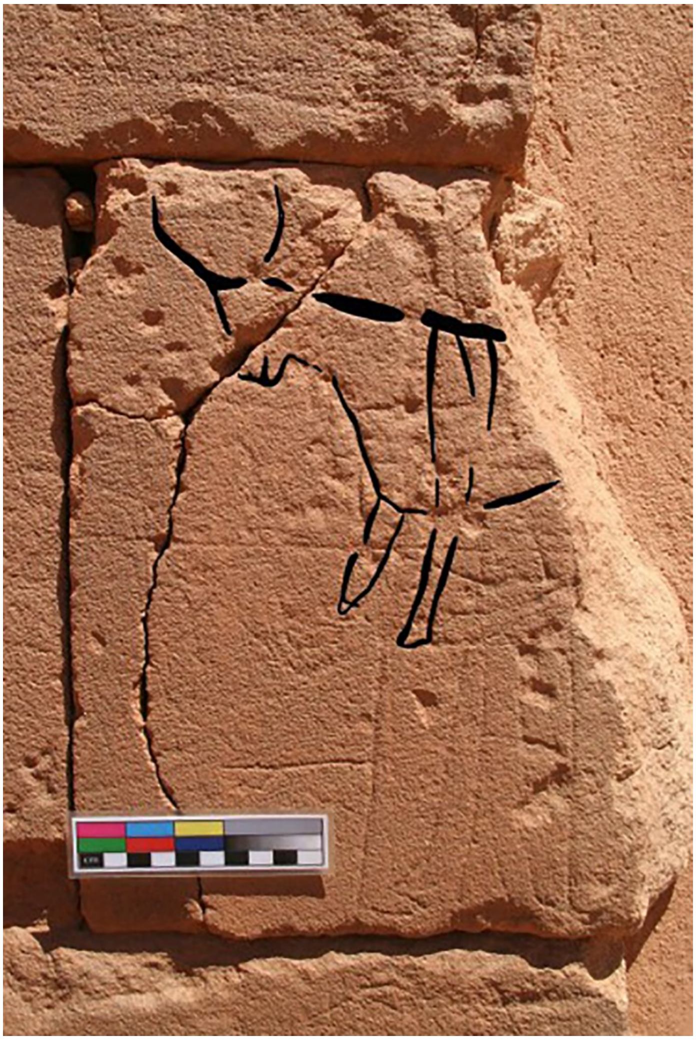

Figure 5. Musawwarat es-Sufra, Graffito in Great Enclosure depicting cattle (© Musawwarat Graffiti Archive, <http://musawwaratgraffiti.mpiwg-berlin.mpg.de/index_html>).

Pottery and cooking-systems: a few considerations

Meroitic complexes have yielded some wares, especially tubular jars, which were buried up to the shoulder into the ground along the internal perimeter of the walls, according to a custom widespread throughout the Meroitic territories. Similar wheel-made jars were brought to light at Abu Erteila, inside a late Meroitic building made of re-employed materials (Baldi 2014, 26–30). Their good preservation and the upright position suggest that these ceramics had been buried into the ground before the collapse of the structure. They were originally produced for this function, judging by the common pointed bottom that made the insertion easier.

The exact function of these buried pots is still unclear, although the recurrent occurrence of ash and charcoal inside them, as well as the burning traces on the surfaces, indicate the use of some of them for heating or cooking foods; burnt animal bones, bearing marks of butchery, were sometimes found inside the pots. A peculiar cooking system observed in many Meroitic sites required the use of two vessels, one inserted inside the other, food was in the upper pot and was cooked through contact with the embers inside the lower one (Baldi 2013, 226, note 10).

The other ones were probably employed for storage. Food magazines are a common occurrence throughout the kingdom as well (Welsby 1996, 130).

Cooking pots were usually undecorated, with a few exceptions, for example, a sherd from Abu Erteila showing a white semicircular motif. They can be sometimes recognised from fabric, as it is clearly illustrated by thin section and Scanning Electron Microscope images of a potsherd from Abu Erteila (Baldi 2013; 2014, 26-30) (Fig. 6). The fabric is very porous and includes a few iron oxides, probably limited to those that were naturally present in the paste, confirming the skill of Meroitic ceramists. In fact, iron lowers the melting point of the ware, and the occurrence of many iron oxides would cause the breaking of the pot on contact with fire or embers; at the same time the high porosity, mainly due to the very coarse grained fabric and to the addition of organic materials, offers extra strength to the pot during the variations in temperature. The so-called black core is frequent, manifesting itself as a carbon streak resulting from incomplete oxidation.

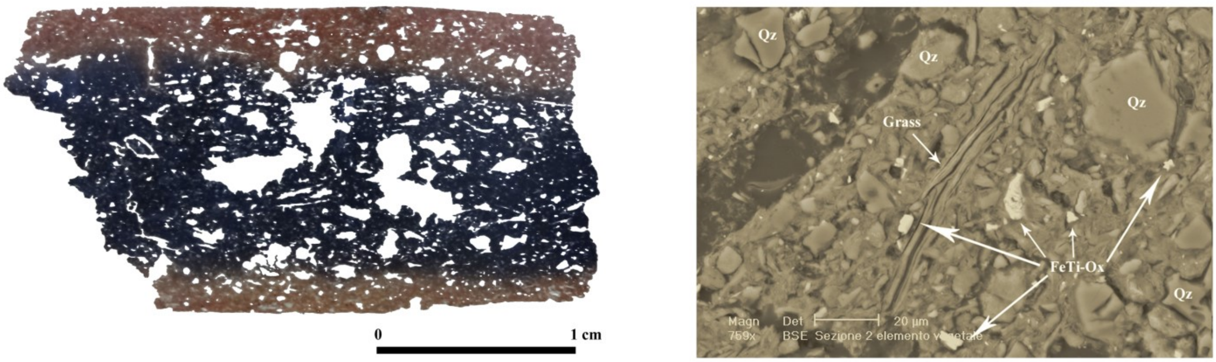

Figure 6. Abu Erteila, Pot-sample C2: thin section and SEM image (by Baldi and Bellatreccia).

Conclusion

The ongoing research is still in a preliminary way; studies of different nature concerning the whole Kushite territory have been considered, and yield the image of a heterogeneous food regime of the Nubian populations. It originated from an encounter between indigenous customs and foreign influxes, according to the process of acculturation and elaboration that determined many aspects of the local society. The diffusion of bread from Egypt and Near East is the main symbol of this process.

Archaeological, archaeometrical and botanical sources have revealed the primary role of the summer crops, that were also used to make beer. Daily diet was usually completed by meat, whereas the surprising poor consumption of fish could be explained by a religious taboo. Moreover, several findings suggest an autochthonous production of wine, but the local needs were mainly satisfied by the importations from north.

The next steps of the research want to recognize specific daily nourishments in the different areas of the kingdom, possibly revealing the pre-eminence of livelihood activities than others, and to deal with the ritual value of food and drink.

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The Valley of the Queens: some preliminary remarks on the social identity of the 18th-dynasty tomb owners

Emanuele Casini

Introduction

The paper investigates evidence for the social identity of the 18th-dynasty tomb owners within the Valley of the Queens (Fig. 1), an issue that has so far received little scholarly attention (Leblanc 1989b; Leblanc 1990, 24; Strudwick and Strudwick 1999, 127; Lecuyot 2000, 45-6; McCarthy 2007, 105) and is in need of being revisited and further developed. Known to the ancient Egyptians as *tꜣ s.t nfr.w* (Leblanc 1989b, 14-20), the Valley of the Queens is renowned for its decorated tombs prepared for queens, princesses, and princes during the Ramesside Period. However, the majority of the tombs cut into this necropolis, approximately seventy, are undecorated and datable to the 18th Dynasty by archaeological finds and architecture (Ballerini 1903; Schiaparelli 1924; Leblanc 1989a; Lecuyot 1996; Strudwick and Strudwick 1999; Lecuyot 2000).

After a brief introduction on the geography of this necropolis, its history during the New Kingdom followed by an overview on the burials of the 18th-dynasty royal wives and king's progeny in the Theban area, I will address the main topic concerning the social identity of the tomb owners of the 18th-dynasty Queens' Valley, considering varying aspects such as tomb architecture, archaeological materials, and the deceased's titles and tasks. Up-to-date data and comparisons with other contemporary necropolises within the Theban area will highlight that the 18th-dynasty Valley of the Queens was a burial setting for selected people - royal family members and court individuals - who were interred therein not because of their high-ranking status but by virtue of their close ties and kinship with the king under whom they lived. Although the conclusions here may already be familiar to most scholars, the aim of this contribution is to provide a new means and viewpoint through which to interpret the 18th-dynasty Valley of the Queens.

Figure 1. Aerial photograph of the Valley of the Queens (© Getty.edu).

The Valley of Queens during the New Kingdom

Located on the Theban west bank, the Valley of the Queens is a concealed necropolis that hosted burials from the very end of the Second Intermediate Period/early New Kingdom onwards. This necropolis occupies a Y-shaped wadi, along which the majority of the tombs have been cut. Around the main wadi, there are other lateral, ancillary valleys, three to the north (the Valley of the Rope, the Valley of the Three Pits, and the Valley of the Dolmen) and one to the south (the Valley of Prince Ahmes) (Leblanc 1989b, 4-11) (Fig. 2). The geographical structure of this necropolis (1), which is hidden behind the cliffs that rise where the strip of fertile land ends, its vicinity to the el-Qurn peak (2), and the presence of the so-called Grotto-Cascade (3), a natural sanctuary excavated into the rock which is connected with the idea of the rejuvenation of the dead (Desroches-Noblecourt 1990), are among the elements that very likely led to the choice of such a setting for the burials of selected individuals (Leblanc 1989b, 12).

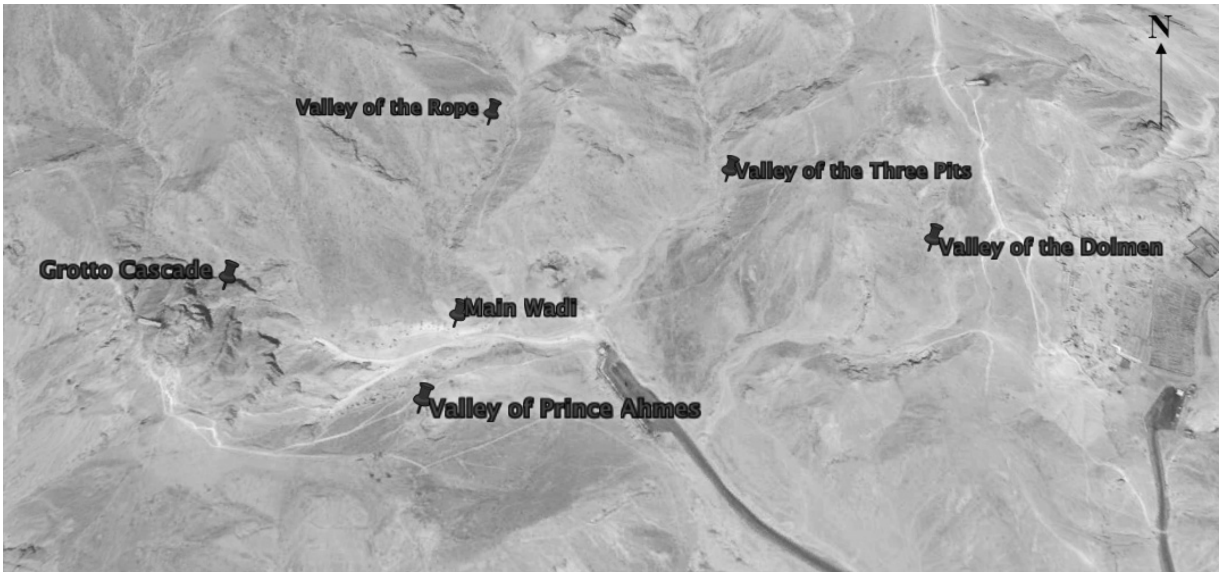

Figure 2. The Valley of the Queens (adapted from Google Earth).

Who were these 'chosen individuals'? '*The general assumption, among the public at least, is that the pharaohs were buried in the Valley of the Kings and the queens and lesser royal-family members within tombs in the Valley of the Queens*' (quotation from Reeves 2003, 69). However, the situation is much more diverse than one might imagine. In addition to the burials of kings, we know that other individuals like royal wives, princes, princesses, and '*people other than pharaohs*' had the privilege of being buried within the 18th-dynasty Valley of the Kings (reference and quotation from Bickel 2016). Moreover, queens' burials within the 18th-dynasty Valley of the Queens have not yet been positively identified (Reeves 2003, 69), even though an interesting clue on this regard has been brought to light quite recently and will be presented below. Only during the 19th and 20th Dynasties was the Valley of the Queens used regularly as a burial setting for royal consorts, a trend that started with the tomb of Satra (QV 38), wife of Ramses I and mother of Seti I (Ballerini 1903, 11; Schiaparelli 1924, 105-7; Leblanc 1989a, 230-7; Franco and el-Fikri 1990; McCarthy 2007, 107).

Afterwards, Seti I and Ramses II had several tombs cut for their wives and a few princesses, whereas during the reign of Ramses III princes as well were buried therein (McCarthy 2007, 105). In the light of this consideration on the gender distribution of the tomb owners, it is apparent that during the 19th Dynasty this necropolis was reserved for the female component of the royal family, an exclusivity that reflects the new conceptualization of the role of the queen during the Ramesside Period (McCarthy 2007). If the situation concerning the social background of the Ramesside tomb occupants appears to be clear, the same cannot be said with regard to the 18th-dynasty tomb owners. This uncertainty, in fact, is due to several robberies and the subsequent scarcity of archaeological findings. Moreover, the lack of wall decoration and inscriptions, unlike the tombs datable to the Ramesside Period, deprives us of information on the deceased's identity and makes the identification of the tomb occupants challenging if not often impossible.

Due to the aforementioned difficulties, inexact theories have increased confusion and misunderstanding. At the beginning of 1903, slightly before E. Schiaparelli's excavations in the Valley of the Queens, G. Legrain bought some fragmented canopic jars on the antiquities market in Luxor (Legrain 1903; Legrain 1904). According to Legrain, these fragments came from the Valley of the Queens because of their precious materials, quality of manufacturing and the names inscribed upon them. Among these pieces, those made of alabaster bear the names of the Queen Henut (fragment n. 1 in Legrain 1903) and Queen Nebetnehet (fragments n. 2 and 3 in Legrain 1903). Some limestone fragments belong to the *sꜣ nsw* Menkheperra (fragments n. 6 and 7 in Legrain 1903, 139; fragment n. 1936 in Legrain 1904, 140), likely a son of Thutmosis III (Dodson and Hilton 2004, 138), and the *sꜣ.t nsw* Tiaa (fragments n. 8 and 9 in Legrain 1903, 139; Legrain 1904, 141), likely a daughter of Thutmosis IV (Dodson and Hilton 2004, 140). Other canopic jar fragments mention some women bearing the title *ẖkr.t nsw*. In the course of time Legrain's hypothesis has been accepted and promoted by scholars, despite the missing find-spot of such fragmented materials. However, this theory has been challenged by P. Litherland, on the basis of recent finds from some shaft tombs within sector WB1 in the Wadi Bariya: Fragments of canopic jars that were '*deliberately smashed in antiquity*' as the result of an official desecration (Fig. 3), jar dockets and other inscribed objects bear the names of Queen Henut, Prince Menkheperra, Princess Tiaa and some women with the title *ẖkr.t nsw* that are also attested on the fragmented canopic jars that Legrain bought. Thanks to this discovery, it became apparent that Legrain's fragments came from the WB1 and not from the Valley of the Queens (Litherland 2014b).

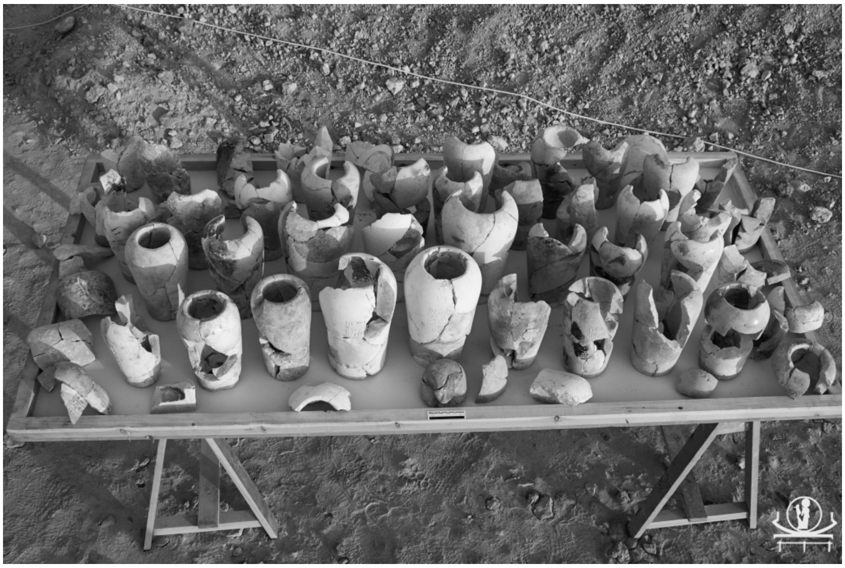

Figure 3. Some of the reconstructed canopic jars brought to light by the archaeological mission of the New Kingdom Research Foundation in the WB1 (© THE NEW KINGDOM RESEARCH FOUNDATION).

Some remarks on 18th-dynasty queens' tombs in the Theban area

At this stage, it is necessary to say a few words about the 18th-dynasty queens' burials (for an overview: Strudwick and Strudwick 1999; Dodson 2003; Reeves 2003; Roehrig 2010; Preys 2011; Aston 2015; Bickel 2016), an issue that is still the subject of research. As far as we can establish, during the 18th dynasty, royal wives were buried across a broad geographic area within the Theban necropolis. Queen Ahmes-Nefertari (TT 320) and Queen Ahmes-Merytamun (TT 358) were interred at Deir el-Bahri (Aston 2015). Queen Ahhotep was found in her intact (re-)burial at Dra Abu el-Naga (Reeves 2000, 50). Merytra-Hatshepsut, consort of Thutmosis III, seems to be the first royal wife for whom a tomb was prepared in the Valley of the Kings (KV 42), even though she was not buried therein (Reeves 2003, 69; Roehrig 2010). Two queens were very likely interred within the two pillared side-chambers of Amenhotep III's tomb WV 22 (Reeves 2003, 70). The 'Project MISR: Mission Siptah-Ramses X' (University of Basel) has recently discovered a fragmented canopic jar bearing the name of Queen Tiaa, a minor wife of Amenhotep II, within KV 32 (Jenni 2009, 17). Like the side-chambers of WV 22, the burial chambers of KV 32 and KV 21 also have a pillar within them, thus leading N. Reeves to the conclusion that this may have been a typical element of tombs belonging to queens (Reeves 2003, 71-2). In effect, KV 21 hosted the mummies of two women, both with the left arm bent over the chest and the right one straight at their side, a clue in support of their identification as queens (Ryan 1990; Reeves 2003, 71). Another tomb with a single pillar in the burial chamber is KV 38, which was attributed to Thutmosis I just after its discovery but has recently been interpreted as the tomb that hosted the re-burial of the dead king commissioned by Thutmosis III (Preys 2011, 318-20); however, according to N. Reeves, KV 38 may have originally been planned for a queen (Reeves 2003, 72). Tomb KV 56, albeit unfinished, was supposed to be furnished with a single pillar and, following N. Reeves, may have been planned for an 18th-dynasty royal consort, even though it was not used until the 19th dynasty (Reeves 2003, 72). KV 39 has been recently attributed to Queen Inhapi (Aston 2015), albeit without a pillared burial chamber. Tomb AN B, discovered by H. Carter at Dra Abu el-Naga, may belong to the group of the early 18th-dynasty queens' tombs: Even though the burial chamber presents two pillars, H. Carter noticed that it had been extended and its original plan consisted of a squared burial chamber with a single pillar (Carter 1916, 149-150; Reeves 2003, 71-72). Finally, albeit without pillar in the burial chamber, KV 33 may have be planned for a queen considering its close vicinity to Thutmosis III's tomb (KV 34) (Thomas 1966, 139-140; Bickel 2017, 15-17).

Other tombs for queens have been cut in the Western Wadis. In the Wadi Sikket Taqa el-Zeid, H. Carter found the cliff-tomb prepared for Hatshepsut when she was a royal wife (Carter 1917; Thomas 1966, 195-6; Reeves 2003, 69). In the Wadi Gabbanat el-Qurud, a cliff-tomb had been cut for three minor wives of Thutmosis III (Winlock 1948; Lilyquist 1998; Lilyquist 2003; Reeves 2003, 69). Finally, the recent excavations of the New Kingdom Research Foundation carried out in the site WB1, south of the Wadi Bariya, have identified shaft tomb n. 2 as the burial of Queen Henut and other court individuals lived during the reign of Amenhotep III (Litherland 2014b).

This brief overview highlights that during the 18th Dynasty, within the Theban necropolis, there was a gradual shift in the location of queens' burials southwards and, at the same time, inwards, very likely in the search of safe and hidden places (Fig. 4). In any case, as highlighted above, it is evident that there was not a specific burial ground for queens during this epoch, contrary to the trend that was to develop in the Ramesside Period.

Figure 4. Localisation of the burial grounds that hosted 18th-dynasty queens' burials (adapted from Google Earth).

Turning back to the Valley of the Queens, so far no tomb with apparent queenly patterns has been identified with certainty (Reeves 2003, 69). F. Ballerini and E. Schiaparelli discovered a tomb in the vicinity of some graffiti that preserved the name of the royal scribe Butehamun ('*La presenza di tali graffiti erano indizio della vicinanza di qualche tomba importante*': quotation from Ballerini 1903, 34). This tomb, located in the right branch of the Valley of the Rope, had been attributed by Schiaparelli to a pharaoh, or a royal son, of the late 17th-early 18th dynasty due to its architecture and the discovery of a fragment of a calcite canopic jar (Schiaparelli 1924, 46-7). Its plan consists of a steep staircase entryway, a long sloping corridor and a burial chamber (which was likely endowed with a pillar, according to Schiaparelli: 1924, 47). Therefore, such a plan seemed to recall that of the abovementioned 18th-dynasty tombs designed for queens in the Valley of the Kings and at Dra Abu el-Naga. However, according to Ballerini this tomb was never used because of the instability of the ceiling; moreover, he was of the opinion that the heap of stones in the middle of the room was not indicative of the presence of a pillar (Ballerini 1903, 33-7). A French mission rediscovered and investigated this tomb between 1993 and 1995 and came to the conclusion that there was no trace of a central pillar, moreover the tomb was interpreted as unfinished and never used, as the absence of funerary furniture highlighted. The calcite jar fragment found by the Italian mission may have entered the tomb following the torrential rains that on occasion affect the Theban region (Côte *et al.* 1996).

At present, the only clue in support of the presence of burials designed for 18th-dynasty royal wives within the Valley of the Queens comes from a recent field survey carried out in the right branch of the Valley of the Rope by another French mission, which found the fragment of a large calcite canopic jar bearing the name of the *ḥm.t nsw wr.t (jꜥḥ-)ms*, who was identified as the wife of Thutmosis I and mother of Hatshepsut (inventory number DR8/20072011: Lecuyot 2011, 178 and Pl. XLVI.B/C). Even though no 18th-dynasty tomb in the Valley of the Queens can be attributed to a queen with firm certainty, the finding of the canopic jar fragment bearing the name of Queen Ahmes may offer the only archaeological evidence for the presence of burials designed for royal wives in this necropolis already in the Thutmoside Period.

Tomb owners and their social identity in the 18th-dynasty Valley of the Queens

As already outlined, the recent investigations led by the New Kingdom Research Foundation have put an end to G. Legrain's theory (Legrain 1903 and 1904), which had been adopted by many scholars over the course of several decades and up until recently. Nevertheless, even though it is apparent that the 18th-dynasty royal family members mentioned by G. Legrain were not buried in the Valley of the Queens, we cannot completely exclude that some royal wives may have received their burials within this necropolis (as suggested by the finding of Queen Ahmes' canopic jar fragment). Considering that no 18th-dynasty tomb seems to show characteristics of the funerary architecture thought to be typical of tombs designed for queens (in particular, the presence of a pillar in the burial chamber), then, for whom were the tombs of this necropolis cut? It is difficult to find an answer for each tomb due to the lack of adequate archaeological evidence and any wall decoration. Moreover, only a small number of tombs can be dated with certainty thanks to the pottery and other finds. These tombs have been attributed on architectural grounds to the 18th Dynasty, and this can be confirmed by comparing them with the architectural layout of the 18th-dynasty non-royal tombs within the Valley of the Kings (Bickel 2016) and the Wadi Bariya (Litherland 2014b).

The 18th-dynasty tombs within the Queens' Valley are composed of a shaft**,** leading to one or more chambers, all undecorated (Fig. 5) (we know of a few Theban tomb-chapels with decorated substructures: Dodson and Ikram 2008, 227-8). A very few tombs show a staircase entryway that, according to Ch. Leblanc, was cut into the rock in order to facilitate the removal of the excavated materials (after that, the staircase was filled up with stones to erect the fourth wall of the shaft: Leblanc 1989a, 232-3). These tombs have three types of axis, longitudinal, bent, and sometimes a combination of both; no marks nor traces of any sort of delineation of the shaft entrances have been detected; no orientation system has been followed in their planning; moreover, no traces of superstructures, funerary chapels nor stele have been found (Leblanc 1989a, 230-7).

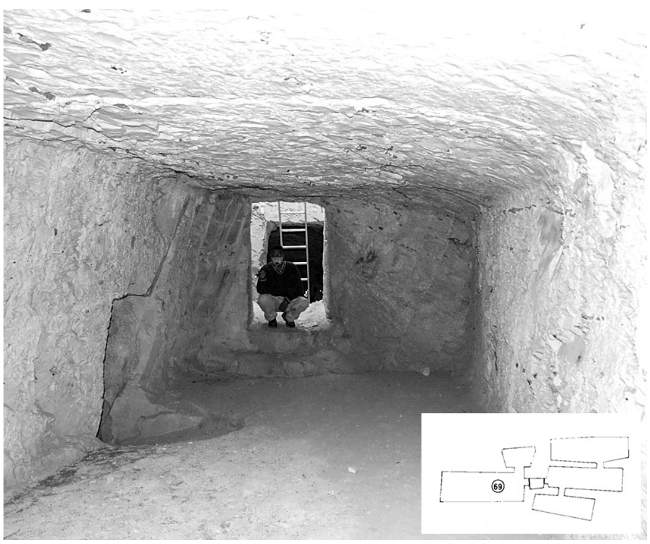

Figure 5. Photograph of tomb QV 69 (© Getty.edu) and its plan (adapted from Leblanc 1989a).

The 18th-dynasty tombs are attributable within a timespan from the very late 17th/early 18th Dynasty (the earliest tomb cut in this necropolis might be that of Princess Ahmes, QV 47: Schiaparelli 1924, 13-21) and the reign of Amenhotep III. Some findings (listed below) confirm such timespan: A sherd of pottery with the name of Thutmosis I from tomb QV 9 (Lecuyot 1992, 98); an inscribed golden cap of a sceptre with the name of Thutmosis II found within tomb QV 12 (Lecuyot 2000, 45-6); earthenware jar stoppers with the cartouche of Amenhotep III were among the remains found within tomb QV 22 (Schumann Antelme 1995). In addition, among the excavated materials from tomb B in the Valley of the Three Pits, a French mission brought to light a clay seal impression depicting a winged uraeus protecting king Thutmosis III represented as a sphinx wearing the *ḫprš*-blue crown (Loyrette 1997, 180). In the same ancillary valley, within tomb E, vases made of red marly terracotta show geometric decoration on the handles, body and rim that is typical of the reign of Thutmosis III (Loyrette 1997, 189). Although these aforementioned objects do not give any information about their owners, they are important because they confirm what has been stated previously, that the 18th-dynasty Valley of the Queens was used until the reign of Amenhotep III, whereas traces of a use of this necropolis during the Amarna Period and in the late 18th dynasty have not been highlighted so far.

It is noteworthy to remark that tomb plans did not necessarily become more complex as the 18th Dynasty progressed. For instance, tomb QV 22 shows a simple plan consisting of a shaft and a single chamber (with an annexe), which is similar to that of the shaft tombs designed at the very late 17th/early 18th Dynasty in the same necropolis. However, QV 22 can be dated to the reign of Amenhotep III thanks to the finding of jar stoppers with the impression of the king's cartouche (Lecuyot 1996; Schumann Antelme 1995; Schumann Antelme 1999). Therefore, the dating of the tombs according to their architectural plan alone may be misleading.

The abovementioned absence of tomb superstructures and funerary chapels deserves a brief comment. During the 18th Dynasty, the non-royal deceased could manifest their social status by means of the decorated tomb chapel, which worked as the means to preserve and convey their identity to the future generations (Hartwig 2004). However, the tomb owners of the 18th-dynasty Queens' Valley renounced (or were forced to renounce) these visible marks, an aspect that leads one to wonder how they manifested their social status and where their funerary cult was carried out. The thorny issue concerning the ritual activity in the Valley of the Queens is far from solved (with regard to the Valley of the Kings: Lieven 2016; Bickel 2017, 22-28). No textual documentation mentions it, moreover, the archaeological evidence, if there was any, may not have been recorded during the primary field investigations. It is likely that the mortuary cult of the Queens' Valley tomb owners may have been carried out in the vicinity of the funerary temples of the kings they served (Strudwick and Strudwick 1999, 127). Otherwise, we may assume that the funerary cult of such individuals was fulfilled within their relatives' tomb chapels. A clue on this regard comes from the tomb of Userhat, the first prophet of the royal *ka* of Thutmosis I (TT 51, reign of Seti I): here, Imhotep (the same Imhotep of tomb QV 46) appears as an ancestor of Userhat, even though the genealogy seems to be of limited historical validity (Davies 1927, 20-2, Pl. XV; Roehrig 1990, 23. Userhat may have referred to Imhotep since the vizier lived during the reign of Thutmosis I). In addition, one might think that the commemoration and funerary cult of the Queens' Valley tomb owners were carried out elsewhere, at Memphis and Gurob, for instance, where the royal residences were located (as suggested by S. Bickel with reference to the funerary cult associated to non-royal individuals buried within the Valley of the Kings: Bickel 2017, 26).

The lack of any decoration and tomb superstructure might have been, according to the viewpoint of the 'commoners' buried in the Queens' Valley, a worthy restriction. The secrecy of the burial setting may reflect more 'social importance': the very fact that they were buried within that concealed necropolis and close to members of the royal family (queens, princes and princesses) was a privilege for such people. This was the mechanism that worked in the Valley of the Kings, where the 'commoners' could benefit from the geographical proximity to the king under whom they lived and served. Among the figurative program of the Theban decorated tomb chapels, the reference to the king is recurrent, something that the deceased wanted to stress on purpose in order to underline their position within the society (Dodson and Ikram 2008, 221). However, 'commoners' who were buried in the Valley of the Kings, the Valley of the Queens and the Western Wadis did not need to display their closeness-in-life to the king since they had received the privilege of being buried close to him and the royal family members they had lived with. The absence of tomb superstructure and wall decoration is a characteristic shared with the 18th-dynasty non-royal shaft tombs in the Valley of the Kings and those in the WB1, all these designed for members of the royal family and court individuals. Therefore, by means of this comparative association, it may be assumed that people of the same social background were buried in the Valley of the Queens as well.

Another clue that reflects the special status of this necropolis comes from the Valley of the Three Pits. Among the materials found within tomb A, there are four clay seal impressions with the representation of the recumbent jackal upon the three rows of captives (Loyrette 1997). This kind of seal impression (Goedicke 1993) has been found mainly, but not only, in the Valley of the Kings, used to seal both tombs and objects. In addition, a mud seal with the impression of the seal of the necropolis has been found during the re-clearance work within the WB1, which contained the tombs of 'ornaments of the king' and members of the royal family of Amenhotep III (Litherland 2014b). The finding of impressions of the seal of the necropolis within the Valley of the Three Pits may suggest that this burial ground was under the control of the same necropolis management that oversaw royal and non-royal tombs within the Valley of the Kings and the Western Wadis. Therefore, it is likely that the tomb owners buried in the Valley of the Queens were people of the same social standing as those buried in the Valley of the Kings and in the Western Wadis, individuals who were selected on the basis of their ties with the royal court and kinship with the king. The reason why such individuals were allowed to be buried within the Valley of the Queens, and not in other burial sectors of the Theban west bank (i.e. Dra Abu el-Naga, Sheikh Abd el-Qurna, etc.) depended on a selection criteria that in some cases can be grasped thanks to the few attested titles and tasks.

Among the most prominent tomb owners within Queens' Valley there are some royal sons and daughters (QV 8: Franco 1988; QV 17: Loyrette 1987; QV 47: Schiaparelli 1924, 13-22; QV 72: Koenig 1988, 128; QV 76: Demas and Agnew 2012, 26; QV 82: Demas and Agnew 2012, 26; QV 88: Schiaparelli 1924, 22-4). Of these, the *sꜣ.t nsw* Ahmes (QV 47) is the only one whose royal bloodline is known (she was, indeed, daughter of King Seqenenra Taa II). The affiliation of the other royal sons and daughters is unknown, except for one, the *sꜣ nsw* Ahmes, the owner of QV 88 (Schiaparelli 1924, 22-4): Ahmes was son of Nebsu and born of the mistress of the house Ian, as attested on his fragmented shabti (Turin ME S. 05126: Schiaparelli 1924) and his linen shroud (Turin ME S. 05051: Ronsecco 1996).

Not many burials of 18th-dynasty princes and princesses have been identified so far (Dodson 2003). The burials of royal offspring of this epoch that are known so far are: KV 35 (the tomb of Amenhotep II, within which prince Webensenu may have been buried: Reeves and Wilkinson 1996, 100); the undecorated shaft tomb n. 40 in the Valley of the Kings (Bickel 2014); the undecorated shaft tomb n. 2 in the WB1 (Litherland 2014b); the Sheikh Abd el-Qurna cachette (Dodson and Janssen 1989; Bouvier 2009); tomb MMA 1021 in the southern Asasif (containing the re-burial of Prince Amenemhet: Lansing 1920; Hayes 1959, 52). In addition, members of the royal family were found within the royal cachette TT 320 (Bouvier 2009, 64, footnote 57). Other burials of 18th-dynasty *sꜣ nsw*-individuals are known but it is certain that such people were not true king's sons since their biological filiation is recorded: for instance the *sꜣ nsw* Tetiki, buried in TT 15 at Dra Abu el-Naga (Hofmann 2010), may have held this epiteth by virtue of his supposed kinship to the royal wet-nurse Tetihemet (Davies 1925, 14; Roehrig 1990, 12-3); therefore, it is likely that he grew up with the pharaoh, that being the reason why he was appointed with such an epiteth.

The cases of 'prince' Ahmes (QV 88) and the other 'non-royal *sꜣ.w nsw*' require a brief *excursus* on the *sꜣ nsw* title (for an overview: Schmitz 1976; Hafemann 1993; Miniaci 2010). As far as we know, the *sꜣ nsw* title designated, until the Middle Kingdom, princes who had a direct kinship with the king or blood ties with the royal family. Starting from about the mid-13th Dynasty onwards, this title indicated not only the king's sons but also individuals without any blood relation to the king, nor belonging to the royal family. The *sꜣ nsw* Ahmes (QV 88) is very likely one of these individuals who received such an honorific designation. Moreover, it may be likely that even 'invisible' *sꜣ.w nsw* were buried in the Valley of the Queens. In fact, according to A. Dodson, '*until well into the New Kingdom, princes appear to have taken no part in the administration of the country outside their father's reigns. To state the case more accurately, no officials are explicitly said to be a brother of the ruling king*'. Thus, following A. Dodson's assertion, it may be presumable that the sons of a dead king were no longer labelled as *sꜣ.w nsw* because, after the king's death, '*the possession of the royal blood lost its political significance once individuals had passed out of the direct line of succession*' (reference and quotations from Dodson 1990, 88-9). A possible scenario may be that some of the individuals buried within the Valley of the Queens were originally true *sꜣ.w nsw* and *sꜣ.wt nsw* who had lost the status of royal sons/daughters after their father's death. In addition, A. Dodson's theory needs a brief annotation. Two 13th-dynasty individuals, Seneb and Khakau, bore the title *sꜣ nsw* without being king' sons: Their father was indeed the 'God's Father' Montuhotep. However, they had a kinship with the reigning king, Sobekhotep III, to whom they were brothers (Schmitz 1976, 208-11). It is likely that Sobekhotep III appointed them as *sꜣ.w nsw* in order to assure a blood lineage, due to a missing crown prince, or just to assure himself of their loyalty. In any case, this example should be kept in mind to be aware of the spectrum of possible cases regarding the *sꜣ.w nsw*/*sꜣ.wt nsw* buried within the Valley of the Queens. It is worth remarking that 'non-royal *sꜣ.w nsw*' were buried not only in the Valley of the Queens but also elsewhere within the Theban necropolis (see the abovementioned case of Tetiki TT 15): interpersonal, strict bonds with the king may be the plausible criterion behind such a distinction, however the range of possibilities is rather broad and it seems that each case differs from the other and there is no fixed rule.

Besides the aforementioned royal sons and daughters, only a few other tomb owners are attested by names and/or titles. Sometimes their prominence can be inferred from the scarce remains of their burial equipment. Imhotep, the owner of QV 46, was a vizier, governor of the city, and judge during the reign of Thutmosis I. His tomb was excavated by the Italian archaeological mission (Schiaparelli 1924, 25-34). Among the findings within QV 46, there were a few fragments with some traces of blue pigment and gold leaf, which led E. Schiaparelli to the hypothesis of the presence of a gilded mummy mask over the head. Moreover, on the basis of wooden fragments found within his tomb, it seems that Imhotep was provided with a complete coffin set the like of which was reserved for the most prominent individuals within the royal court (Schiaparelli 1924, 25). Actually, the wooden fragments kept at the Egyptian Museum of Turin are coated with black resin and bear traces of yellow decoration, like the coffins that were produced from the reign of Hatshepsut/Thutmosis III onwards: this suggests that the tomb was opened and reused shortly after the burial of Imhotep (or thereafter). The fact that Imhotep, vizier of Thutmosis I, was buried within the Valley of the Queens, whereas other renowned viziers had their tombs endowed with decorated funerary chapels built in other sectors of the Theban necropolis (for instance, at Sheikh Abd el-Qurna, as in the cases of Rekhmire/TT 100 and Ramose/TT 55) gives us reason to reflect on the background of such choices of locations. In this case, it seems very likely that the selection criterion dictating the choice of individuals to be buried in the Valley of the Queens did not strictly depend on the deceased's political tasks but on a special relationship with the king. Imhotep was a vizier but he acted also as a mentor/educator (*jt mnꜥ*) of the children of king Thutmosis I, therefore he brought up the king's offspring (Schiaparelli 1924, 33; Roehrig 1990, 22-6. The vizier Amenemipet was buried in the Valley of the Kings (KV 48) very likely because of his wife, who was a *ẖkr.t nsw*, thus an individual connected with the 'female entourage': Bickel 2017, 17). In addition, among the findings from QV 46, the wooden meat boxes for mummified joints of meat and fowls (Schiaparelli 1924, 25 and Figs. 24-26; Ikram 1995, 264-5) do not leave any doubt in regard to Imhotep's prominent position. During the 18th Dynasty, mummified meat was a privilege that only a few people could afford, like kings (Tutankhamun: Ikram 1995, 250), queens (Merytamun: Ikram 1995, 278), princes (Amenemhet: Ikram 1995, 268-278), royal parents-in-law (Yuya and Tuya: Ikram 1995, 259-261), and other individuals close to the pharaoh (Maihirpri: Ikram 1995, 257). This clearly suggests that Imhotep enjoyed a special status within the royal court.

Other individuals are attested within this necropolis, although information on them is scarce. Nebiri, the owner of tomb QV 30 (Schiaparelli 1924, 35-9; Chevereau 1994, 150) was a stable master (*ḥr.j jḥ.w*) who lived during the reign of Thutmosis III or slightly before. Some objects of his burial equipment are indicative of his wealthy status, for instance the imported Syro-Palestinian pottery (Schiaparelli 1924, 35) and the finely-carved limestone canopic jars (Schiaparelli 1924, 39; Dolzani 1982, 18-19). Nebiri was not the only tomb occupant, as suggested by a set of terracotta canopic jars coated with black resin. Particular attention should be focussed on his appointment, which was related to horses, a status symbol of the military elite (Janssen and Janssen 1984, 38-43). The nature of the duties and activities that a stable master had to carry out were related to the well-being of the horses. Such an appointment was given to individuals while still potentially very young, therefore they could not carry out any kind of military activity, until they had become older (Ashmawy 2014, 133-5). According to A. Ashmawy, '*stable masters were not high officials; however, at the same time the office guaranteed that one who held it would be promoted to higher positions*' (quotation from Ashmawy 2014, 136). Once again, one has the impression that the possession of a tomb within the Valley of the Queens did not depend on an official appointment, but there were other mechanisms at work that neither the archaeological nor the textual evidence can easily represent, mechanisms that were based on personal, close bonds between courtiers and the king. The commander of troops (*mr mšꜥ*) Nehesi is another individual belonging to the military hierarchy (Lecuyot 2000, 45), for whom neither additional information nor the exact tomb location (QV 70? On this regard: Lepsius 1900, 227; Leblanc 1989b, 69, n. 98) have been preserved.

Tomb A of the Valley of the Three Pits included the burial of an unnamed royal butler (*wbꜣ nsw*). The criterion according to which this royal butler received a burial within this necropolis whilst other 18th-dynasty royal butlers, for instance Suemniut (owner of TT 92 and holder of the title *ḥr.j jḥ.w*, like Nebiri: Ashmawy 2014, 122) and Mentjuiui (owner of TT 172), were buried elsewhere in the Theban necropolis remains unclear. Suemniut and Mentjuiui had a richly decorated tomb chapel. Moreover, Mentjuiui bore the title of *ẖrd n kꜣp*, like Maiherpri, who was buried within KV 36 (the *kꜣp* was an institution connected with the royal palace within which royal children and other youths were educated and received a military training: Orsenigo 2016, 19). It is likely that this unnamed royal butler had his burial in the Valley of the Three Pits because of the same mechanism that was at work in the Valley of the Kings. Influential 'commoners' who received their burials in that necropolis did not have any decorated funerary chapel, they likely did not possess the personal financial resources in order to have their own decorated tomb built (on this regard: Bickel 2017, 27), however they accepted such a restriction and a 'poor' tomb since they would have enjoyed the same destiny as the king, thanks to the spatial proximity of their tombs to the royal sepulchres of the Kings' Valley.

Conclusion

The first use of the Valley of the Queens covers the timespan from the very end of the 17th/beginning of the 18th Dynasty until the reign of Amenhotep III. The scarce archaeological evidence (no intact tomb has been discovered within this necropolis so far) does not offer any proof for burials designed, or at least used, during the Amarna Period and in the late 18th Dynasty. The analysis of the social identity of the 18th-dynasty tomb owners seems to suggest that the lowest common denominator dictating the selection criteria for a burial in the Queens' Valley was personal closeness to the royal court (the same mechanism that was at work within the Valley of the Kings). This hypothesis, despite the information lacking in regards to the majority of the 18th-dynasty tombs, is confirmed by the presence of burials of many *sꜣ.w nsw* and *sꜣ.wt nsw* and the burial of Imhotep, tutor of the royal offspring. The position of the Valley of the Queens, very close to the Valley of the Kings and the Western Wadis, and the similar 18th-dynasty non-royal tomb architecture that these necropolises have in common, as well as the absence of tomb superstructure and the lacking wall decoration, are all telling elements in the light of the present analysis on the 18th-dynasty social background. Since non-royal tombs with the same features in the Valley of the Kings and in the Western Wadis were intended for members of the royal family and the king's entourage, it is very likely that people with a similar social background and royal bloodline were interred in the 18th-dynasty Valley of the Queens.

To sum up, some elements and aspects (listed below) can confirm the impression that the 18th-dynasty Valley of the Queens was a necropolis for selected people: The burials of individuals with the *sꜣ nsw* and *sꜣ.t nsw* titles; the fragmented canopic jar of Queen Ahmes, mother of Hatshepsut, found in the Valley of the Rope; the finding of the impressions of the seal of the necropolis; the wooden meat for mummified meat within QV 46, objects with which only members of the royal court were provided; the morphological configuration of this valley, as concealed as the Valley of the Kings and the Western Wadis, with the only access being easily controllable; the absence of tomb superstructures and lack of wall decoration, which seem to suggest something like 'the less visible and the poorer the tomb architecture, the more important and closer to the king'. All these listed elements speak in favour of an 18th-dynasty necropolis specifically intended for members of the royal family and court individuals who were very close to the pharaoh.

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Current and past research between Tebtynis and Padua: from sand to aerospace

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The project and Anti's archive (Paola Zanovello, Giulia Deotto)

This publication is the result of a multidisciplinary research realized by an international team of scholars of the University of Padua, with the Museum of Archaeological Sciences and Arts (since now MSA), the "Istituto Veneto di Scienze Lettere e Arti" in Venice (since now IVSLA), the Trent University in Canada and the Museo Egizio in Turin. Its focus is the study of Carlo Anti's life and activities in Egypt, especially related to the reconstruction of his archaeological excavations in Tebtynis. Carlo Anti (Villafranca di Verona, 1889-Padua, 1961) was professor of archaeology and Rector of the University of Padua (Polacco 1962; Ghedini and Biondani 1990, Nezzo 2008, Zampieri 2011). He was appointed to direct the Italian Archaeological Mission in Egypt (M.A.I.) in 1928, when Ernesto Schiaparelli, his predecessor in the role, died leaving the publication of his discoveries incomplete: as consequence, he dedicated a first year to improve his knowledge of the Egyptian culture and collect the data left unpublished by his predecessor; then he decided to conduct excavations in Ptolemais of Upper Egypt (Menschiah) in 1929 and from 1930 to 1936 in Tebtynis, in the southern area of the Fayum oasis. His discoveries were well documented with photographs, notes, plans and one cinematographic film, but they were never published, so Anti's excavations in Tebtynis remained mostly unknown for decades. The original archive, created by Anti for his personal use, contained several sections devoted to Anti's personal folders, correspondence, scientific activity and teaching: amongst them, Tebtynis was just a small part of the section dedicated to the research activities, together with Anti's studies on Cyrene, Greek and Roman sculptures and theatres.

The archive was split, after Anti's death, into different locations (University of Padua, Civic Library of Padua and the Istituto Veneto) and was only recently rediscovered and studied thanks to a PhD thesis (Deotto 2015) and a series of researches here presented. The folders dedicated by Anti to the seven missions in Tebtynis are now located between the MSA and the IVSLA: it is composed of 1769 photographs, 121 diapositives, 26 plans and technical drawings, 1514 papers, including notes, letters, reports, preliminary studies and one cinematographic film. Recently a new folder, composed of at least 116 papers and 57 photographs, has been found at the University and can be added to the Tebtynis section of Anti's archive.

Anti was present on the site of Tebtynis from 1930 to 1932, when he was appointed as Rector of the University of Padua; therefore, the documents are mainly related to that time span. After 1932, Anti followed from Padua the research conducted at the site by his colleague Gilbert Bagnani. Since then, the documentation of the activities in Tebtynis were kept by Gilbert Bagnani himself in his archive, now kept in the Trent University and in the Art Gallery of Ontario (Canada).

Carlo Anti's archive in Padua: rediscovery and conservation (Alessandra Menegazzi)

As Rector and Professor of Archaeology in Padua, Anti collected an important amount of documents related to his personal and academic activities. As regard to his excavation campaigns in Tebtynis, the documents were originally stored at the Institute of Archaeology of the University of Padua and after Anti's death, his successor, Luigi Polacco, gave them a new assessment and split the archive (Urbani 2014,155-60). A part was lost, and it has recently been found at the Istituto Veneto (Deotto 2015). Some documents regarding the excavations (papers, plans, printed photographs negatives and plates) were kept in the research laboratories of the University while archaeological items and papyri from Tebtynis remained for a long time in the storage of the academic archaeological museum. Finally, all the diapositives created for didactic purposes (images for lessons, conferences, etc.) were available in the Photographic Archive of the Institute of Archaeology (University of Padua). All the archival documents and finds at the University were rescued, restored and promoted from 1978 (papyri's rediscovery: Avezzù 1978) and more from 1995 (archival material, finding: Menegazzi forthcoming), thanks to a series of various activities pursued by the MSA: unfortunately, the different locations have not helped the conservation of the documents, as was verified by a survey conducted ten years after the first discovery. They were in general badly preserved and, for the most part, in great disorder. It was for this reason that the Department of Archaeology decided to collect in the MSA documents and finds in order to preserve the archive and promote its awareness since 2006. Shortly after, some research projects had started, involving the material from Tebtynis in new international perspectives (Zanovello, Menegazzi 2014, 95-100).

The GIS project on Tebtynis (Andrea Meleri)

After the collection of data and a first reconstruction of the activities carried on in Tebtynis, the project focused on specific areas investigated by Anti in order to analyse Anti's own personal view of the site, so the archaeological team, in cooperation with the aerospace engineers of the University, created a GIS project on Tebtynis, assembled to collect, compare and analyse in a georeferenced format all the available planimetric documentation coming from the dig campaigns of the 1930s'. In order to put together this historical source material in a modern GIS project, the first step is to select an authoritative georefenced cartography of the area that will be used as a baseline reference. We decided to acquire a Worldview satellite set of images of the area from Digital Globe (both in visible and multispectral range), as they are able to provide pictures whose resolution is sufficient to identify individual structures within the site. All historical source material is georeferenced directly against Worldview satellite imaginery, using visible structures in the area as control points. In particular, we focused on the great map of the temple of Soknebtynis, drawn by Anti's team in Tebtynis, and on two set of aerial photographs shot over Tebtynis by the Egyptian Air Force in 1934 and 1936 (Brenningmeyer, Begg, 2007: 338-43). The original map was digitalized (Carpinelli *et al.* forthcoming) and then vectorialized (Fig. 3), the aerial photographs were used to create a visual 3d reconstruction of the structures in the form of a printed red-cyan 3d anaglyphs, visible using standard 3d red-cyan googles. This visual 3d reconstruction was useful to better discriminate between standing structures from the fallen ones, to recognise seemingly artificial elevated areas, like mounds of sands carried over from the nearby digs in 1934 and 1936.

The study of the aerial photographs over Tebtynis (Luca Toninello)

The aerial surveys were conducted by the back then recently founded Royal Egyptian Air Force as confirmed by Bagnani's correspondence with Carlo Anti in 1935. Actually, on the 3rd of April 1935 Bagnani wrote: «03/04/1935/ Caro professore... Accludo anche una dalle fotografie aeree fatte dall'Egyptian Air Force. La prego di ricordare il Ministro della Guerra egiziano e la Egyptian Air Force quando la proietta.» (IVSLA, fondo Anti, busta 6, fascicolo 1, n. 10).

The Egyptian parliament had proposed the creation of an Egyptian Air Force in 1928 as a branch of the Egyptian Army. Egypt was under a significant British political influence and the Egyptian Air Force was not different in this regard: Bagnani probably exploited both his personal connections in Egypt and his double nationality (he was the Italian and Canadian son of an English official), as well shown by Begg (infra). Unfortunately, it is not possible to clearly identify the plane used for the flights and the camera chosen to document Tebtynis, but the Egyptian Air Force had only a limited number of models at their disposal: the de Havilland DH.60 Moth since 1931, the Avro 626 and Hawker Audax since 1934, the Avro Anson since 1935. For the camera there is even less certainty but an educated guess would be either the F8 of 1919 or the F24 of 1925 since they were common in the British Air Force and thus likely to be employed by the Egyptians as well.

The two sets of pictures appear to have been created in order to allow the reconstruction of a three-dimensional model of the area (Fig. 2). It is a technique still in use today for aerial imagery where several pictures are taken while flying over an area, each picture partially overlapping the next ones in all directions: this allows to reconstruct the third dimension from a set of two-dimensional images. The mathematical process requires very few data besides the pictures themselves: among these the most crucial missing value is the camera's focal length as it represents a scaling factor for the potential third dimension extracted from the pictures. The absence of such parameter prevents the reconstruction of a realistic model of the site: to cope with this issue either historical sources or some reference environmental elements might be used. It is unlikely that any document remains today registering the particular technical detail of the camera used during the mission but identifying the instrument might help restricting the available options. The second approach involves the use of a known reference point in the site: if the dimensions of a structure of other object in the pictures are known or can be determined, it would be possible to determine the focal length which generates a model matching this particular reference. The two approaches are not mutually exclusive and can be integrated, as it is possible to see in the first case study here presented (Fig. 3).

Multispectral Analysis of the Tebtynis Near-site (Luigi Magnini, Laura Burigana, Armando De Guio)

Analysing the site at a wider scale by means of using satellite multispectral images, we were also able to investigate the near-site and off-site of Tebtynis. The WorldView 2 data were chosen because they provide a good compromise between spatial and spectral resolution. In fact, the satellite is equipped with an 8-band sensor, ranging from visible to near infrared in the electromagnetic spectrum (Tarantino *et al.* 2012). The potential offered by the eight-band data is of particular interest if we consider the wide range of possible archaeological feature types scattered throughout the territory.

Generally digital colour images are displayed in a composition of three bands corresponding to the three additive primary colours: red layer / red band, green layer / green band and blue layer / blue band (RGB), respectively corresponding to Worldview bands 5, 3 and 2. Knowing the frequencies corresponding to the characteristic reflection of certain categories of archaeological objects, we have selected three bands for RGB visualization in order to bring out a specific type of information. First of all, the most typical false colour composition was tested, mapping on the red layer the Near Infrared 1 band, on the green layer the red band and on the blue layer the green band. This composition is very useful for monitoring the health state of the vegetation that is affected by the presence of buried structures and anthropogenic deposits. Another composition, focused on the infrared spectrum, is the Near Infrared 2, Near Infrared 1 and Red Edge bands composition which allows to highlight, with a higher degree of contrast, vegetation, water and buildings. The data clearly indicate the presence of a palaeoriver branch running from north to south and of some secondary palaeochannels departing from the river itself in west direction.

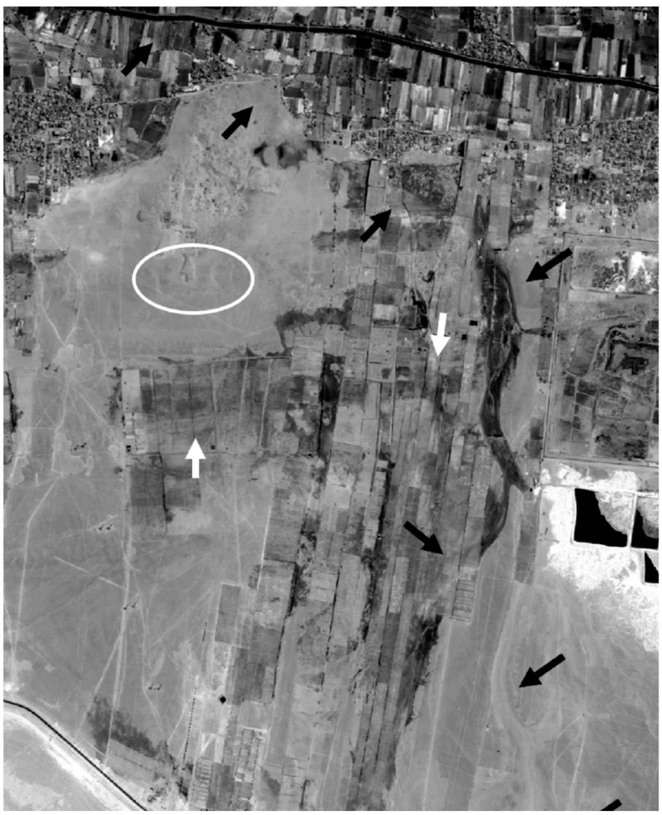

Figure 1. WorldView 2 multispectral satellite image of Tebtynis; composite bands; infrared 1, infrared 2 and red edge. The arrows highlight the paleo-river branch and two channels.

Obviously, it is not possible to identify the precise chronology of the hydrological structures from remotely sensed observations. However, there are some clues that allow us to tie at least one period of occupation of the Tebtynis site to the river branch chronologically. First, the northernmost part of the village seems to be interrupted by the presence of the river that creates a sort of natural limit. A second indication of possible man exploitation of the river is indicated by the regular linear traces that extend perpendicularly from the main course in the east and west directions. These regular evidences, interpreted as irrigation channels, affect a rather large portion of the territory south of Tebtynis, located mainly west of the river branch. In fact, these infrastructures seem to create a complex system of fields around the site, which has partially survived until today.

Another efficient image enhancing strategy for multispectral images involve the treatment of individual bands as algebraic expression values (map algebra). The calculation of the Iron Indices helps to map iron-rich areas (Segal 1982), especially in arid environments. Specifically, we employed the WorldView Iron Index that involves in the calculation the Green, the Yellow and the Blue bands. The spectral variations presented by this index are often linked to anthropic origin as the Tebtynis site seems to confirm. The grey scale distribution highlights the presence of four main areas: the sanctuary, the Graeco-Roman village, the post-Roman village and the near-site area of the fields. Though chronologically the four areas were already known by previous excavations, the analysis has allowed to define the topographical evolution of the site at a spatial and more detailed level.

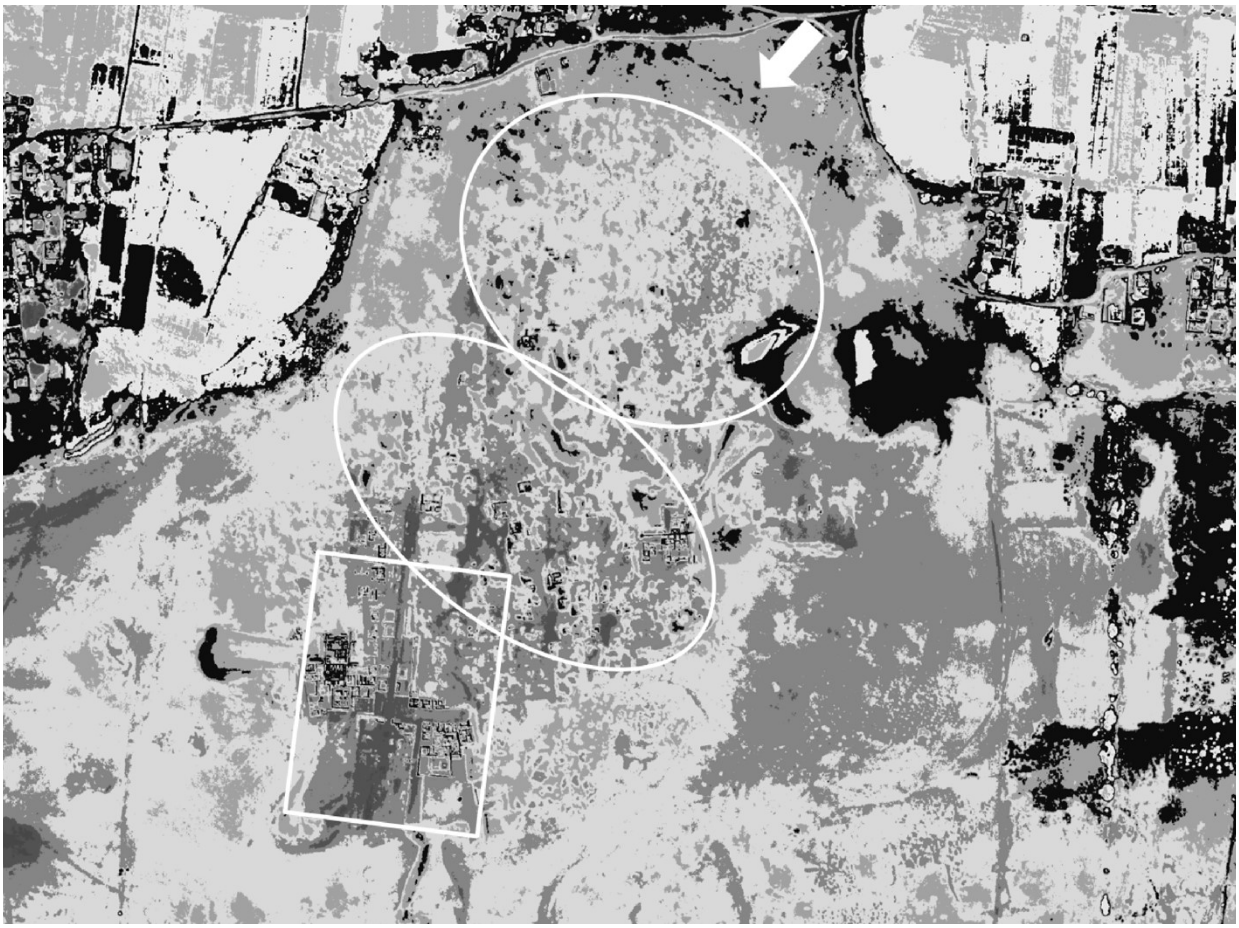

Figure 2. WorldView 2 multispectral satellite image of Tebtynis; classified WorldView iron index. Three main areas are highlighted.

First case study: the vestibule of the temple (Giulia Deotto, Giuseppe Salemi)

The vestibule was a small open court in front of the main entrance to the sanctuary of the god Soknebtynis. It is still visible on the site, even if most of its wall, decorated with carved reliefs, was destroyed after Anti's missions. Anti's documents are the last surviving elements to illustrate this structure as it was preserved at the time of the investigations conducted by Anti. For this reason, a multidisciplinary research conducted on this building, collecting historical plans, aerial photographs, satellite images and historical lateral pictures compared with Anti's notes on the excavation, is particularly helpful to reconstruct the status of the vestibule at the time of the excavation. Anti called the vestibule "sala a rilievi / hall with carved reliefs" due to the presence of beautiful decorations on its walls. Bagnani, in a letter to his wife, reported the discovery of "a building with yards and yards of apparently Ptolemaic reliefs". According to Anti's journal, it was excavated between the 1st and the 14th of February 1931.

Through the use of the GIS project, it is possible to give the exact measurements of the vestibule, thanks to the overlay of the vector file of the map with the aerial photos.

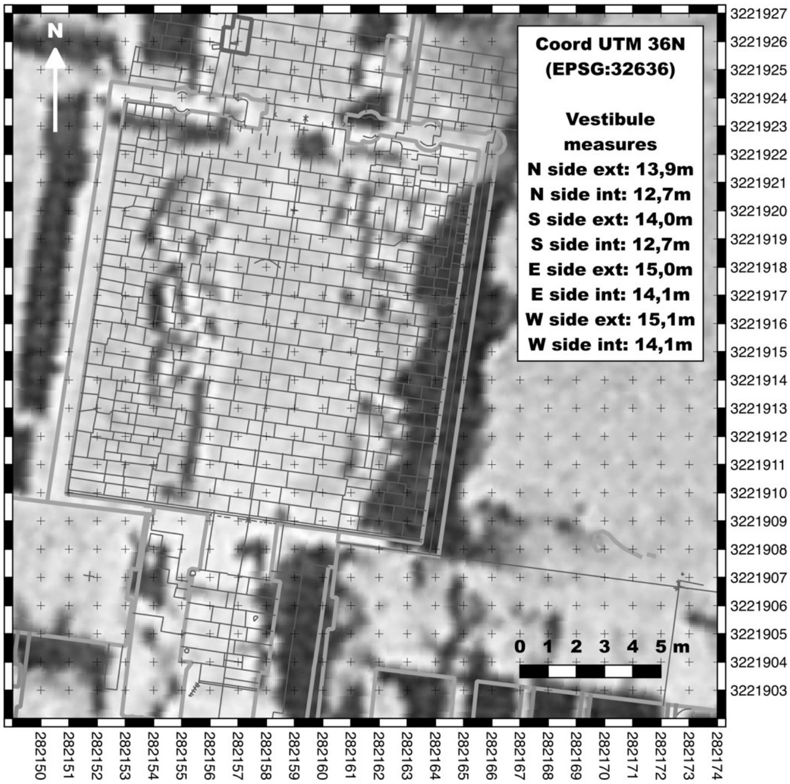

Figure 3. The vestibule seen through an overlay of the historical map and the aerial photographs (created by A. Meleri).

Anti reported also the height of the walls, more than 1 m high and in the archive a technical drawing made by Fausto Franco in 1931 is present, so it is now possible to work on a first 3D reconstruction of the structures, which will be the next step of the project. A first attempt was made by reporting in AutoCad the vestibule's outline taken from Anti's map and then by extruding the walls from the plane.

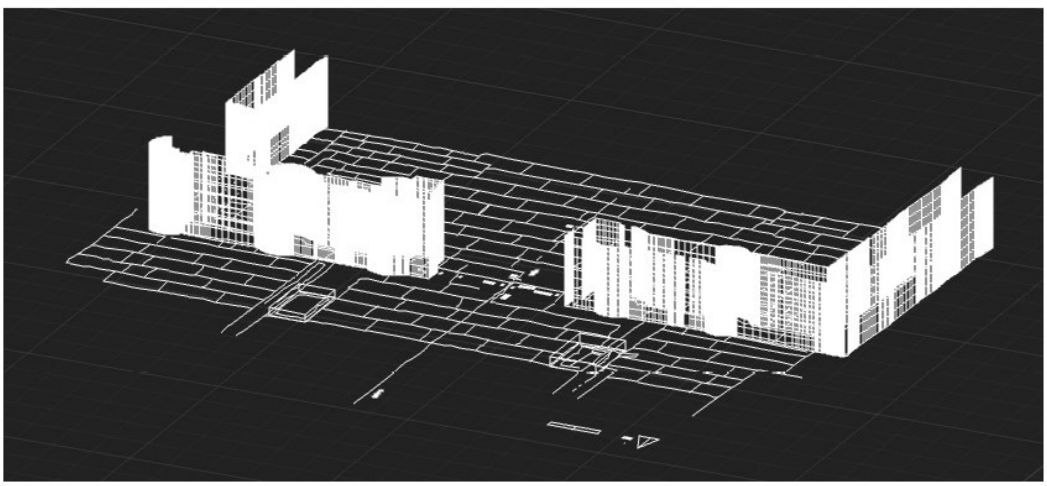

Figure 4. A first 3d model of the vestibule.

Second case study: the so-called insula of papyri (Ian Begg)

In 1934, when Carlo Anti was in Padua as the Rector of the University, Gilbert Bagnani was in Egypt resuming the Italian excavations at Tebtunis although his financial resources for continuing the field work were running out. At the same time, however, the Milanese papyrologist, Achille Vogliano, was staying with Gilbert and Stewart Bagnani at the dig house awaiting approval of his request to excavate at the nearby site of Medinet Madi, ancient Narmouthis, where Vogliano had full funding for his projected excavations. So Bagnani had little choice but to accept Vogliano's generous offer of financial support to continue digging at Tebtynis.

During February 1934, Bagnani had already begun clearing the area between the south (Ptolemaic) and north (Roman) kiosks along the west side of the processional dromos and had uncovered the southern two thirds of a large rectangular compound enclosing small houses. With the arrival of Vogliano, Bagnani began a new excavation notebook dated to Sunday 4th of March entitled "Campagna di scavo della R.Università di Milano." In the same day, Bagnani himself began excavating a similar rectangular compound (the so-called "horrea") immediately to the north of the previous one, leaving Vogliano to finish the southern insula. As the remaining northern third of the insula was cleared, Vogliano claimed the discovery of an enormous mass of Greek papyri in one of its basement compartments; as a result, it was called the Insula of the Papyri. The documentation of this excavation consists of Gilbert's excavation notebook, his letters and photos sent to Carlo Anti, his preliminary publication *Gli scavi di Tebtynis* (Bagnani, 1935), weekly letters from Gilbert Bagnani to his mother in Rome, and from his wife Stewart Bagnani to her mother in Cairo. There is a large album at the Art Gallery of Ontario in Toronto containing photographs arranged according to their format size with two, three or four, and later six prints to a page. Within each of these sections, they proceed generally from south to north in the insula as did the excavation itself. In the intervening decades since the photographs were taken, the stonework and woodwork have been removed, and the mudbrick walls eroded, removed, or covered once again with sand. In addition, Bagnani arranged through his friend Rex Engelbach, the Curator of the Egyptian Museum in Cairo, and Sir Charlton Spinks, the Canadian Inspector-General of the Egyptian Army and Air Force, to have sets of aerial photos taken over the entire site. A plane flew over reconnoitring the site and a series of aerial photos was taken and Bagnani later received twenty-two black and white prints. They cover the entire site from the inhabited cultivated area along the canal in the north over to the desert in the south and west. After Bagnani finished digging in 1936, he arranged for a second set of aerial photos to be taken over the site. Combining the overlapping aerial photos has also enabled 3D analysis of the then standing walls. The plan of the Insula of the Papyri reveals that it was a walled rectangular compound enclosing one large house, three little houses, and two medium houses, each identical in plan and orientation but differing in size suggestive of a hierarchy. Indeed, analysis of the mass of papyri found in a basement compartment suggests that the compound was owned in the second century AD by the rich family of Patron, formerly known as Laches. The papyri intermingled the archives of three families who worked the farms (Pakebkis, Kronion, Turbo), evidently Patron's estate managers. As one possible hypothesis, the largest house might have been used by the family of Patron when visiting Tebtunis and the smaller houses by some of their managers. Thus the Insula of the Papyri at Tebtunis is uniquely well documented by written descriptions of the archaeological research and terrestrial and aerial photos of the area as well as and by one of the largest hoards of papyri ever recorded in an excavation. One day soon, we may be able to reconstruct its walls and repopulate it with named individuals.

Future perspective of the current research (Paola Zanovello)

The study of the archival data offers a starting point to better contextualize the archaeological evidences (both materials and structures) which were excavated by Anti during the seven campaigns in Tebtynis. Most of the objects are now preserved between Egypt and Italy, especially in the Museo Egizio in Turin. They are studied thanks to a joint project supervised by Paola Zanovello and Christian Greco and realized by Giulia Deotto together with Alessia Fassone. In connection with this research a PhD thesis, still in progress, had been realized by Cinzia Bettineschi (supervised by Ivana Angelin, Gianmario Molin and Paola Zanovello) and dedicated to the "Archaeometric study of Egyptian vitreous materials from Tebtynis: integration of analytical and archaeological data", by means of an interdisciplinary and multi-methodological approach (Bettineschi *et al.*, forthcoming; Deotto *et al.*, forthcoming). A new research on the sculptures, made with

Giorgia Cafici (Scuola Normale, Pisa) has permit to analyse and contextualise the three statues found by Anti in the area near and inside the vestibule (Cafici, Deotto, 2017).

Concluding, the study of the artefacts retraced by Anti is contributing to fill the gaps in the archival data and, vice-versa, the investigation of Anti's documentation is significantly improving our knowledge on the considered materials, giving new hints for the reconstruction of the life and the history of this village in the Fayum oasis.

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Forgotten treasures: a journey (re)discovering the amulets of the Kerma Culture in the storerooms of the Museum of Fine Arts of Boston and in the Sudan National Museum of Khartoum

Elena D'Itria

Introduction

This paper deals with the amulets of the Kerma Culture which I studied for my PhD research and represents the first step towards a systematic, articulated study of the Kerma amulets, which have thus far been studied and recorded in very little detail.

Kerma being the capital city of the kingdom of Kush, played a relevant role in the history of Northeastern Africa between the mid-3rd and mid-2nd millennium BCE. The site of Kerma, the largest archaeological site in Upper Nubia, located just south of the Third Cataract, was situated in a strategic position and therefore acted as a trade link between Egypt, Central Africa and the Red Sea. Kerma gives its name to the Upper Nubian culture (Gratien 1978; Bonnet 1990; 2000; 2004; 2014a; Davies 2003).

Unfortunately, so far, no written documents have been found, therefore we must rely solely on other material evidence in order to reconstruct various aspects of this culture (Bonnet 2000, 112).
In this perspective, the study of the amulets is essential because it provides important information regarding to symbols, their protective value, as well as helping us to gain some insights into a still unknown pantheon that could be very complex, possibly composed of Nubian features together with Egyptian and southern African elements.

G. A. Reisner with the Harvard-Boston Expedition, was the first to excavate parts of the site, including the cemetery, between 1913 and 1916 (Reisner 1923a; 1923b; Dunham 1982). He also excavated the royal tumuli and associated funerary chapels in the cemetery, some containing a large number of Egyptian objects, including statues and stelae. He theorised that Kerma, with its numerous indications of an Egyptian presence, was indeed an Egyptian trading post and a fort ruled by Egyptian governors who presided over a large local population at the time of Senwsert I.

Thanks to the more extensive excavations undertaken by the Swiss Mission directed by C. Bonnet from 1973 and subsequently by M. Honegger, from 2002, Kerma was identified as the capital city of the Kingdom of Kush (Reisner 1923a; 1923b; Dunham 1982).

The largest collection of Kerma amulets that I studied for my PhD research (total number 1746) is the one collected during the excavations conducted by G. A. Reisner. My study aimed to elaborate an initial typology and distribution analysis of the amulets in the Kerma culture, as the available publications are largely incomplete. Actually, not all of the excavated materials -as is the case with the amulets- are for example included in Reisner's "Excavation at Kerma", published in 1923.

In "Excavation at Kerma", Reisner did not actually indicate what kind of amulets were found and he did not even specify their number. Photographic documentation was also very poor, as only two plates were devoted to this class of materials (Fig. 1, Fig. 2), therefore making it very difficult to get a clear idea of some of the types of amulets.

Nowadays the amulets of the Kerma culture are housed in three different museums: in the Museum of Fine Arts in Boston, in the National Museum of Sudan in Khartoum, and in the Musée d'Art et d'Histoire in Geneve, where a number of the amulets excavated by C. Bonnet can be found.

During my work in the storerooms in Boston and Khartoum, I had the opportunity of studying the majority of the amulets from the Kerma cemetery that were not referred to in the final report by G. A. Reisner. I was able to measure and photograph them, thus obtaining for the first time a complete analytical record. It was possible to carry out a typological analysis of the amulets attested in the cemetery of the capital city. The data obtained from this study together with those published by the Swiss Mission allowed me to specify the types of amulets recorded in the capital and to realize a typological and distributive analysis based on the context of origin of the amulets, and the chronology of the associated materials, and in most cases to understand to which deceased individuals the amulets were associated (Chart 1, Fig. 3, Table 1).

Figure 1. *Amulet-beads* from Classic Kerma Graves (Reisner negative number A 2114, Photograph © Museum of Fine Arts, Boston).

Figure 2. Amulets from Classic Kerma Graves (Reisner negative number A 2116, Photograph © Museum of Fine Arts, Boston).

I implement a relational database using *Microsoft Access*: this demonstrated to be an absolutely crucial tool as it virtually unifies for the first time the *corpus* of Kerma amulets. The database collects the amulets housed in the MFA and in the NMS; the amulets found by the Swiss Mission (now housed in the MAH); those found in the island of Sai (now housed in the Institut de Papyrologie et d'Égyptologie of Lille) and those found in the sites of Lower Nubia excavated by the Scandinavian Joint Expedition and the Oriental Institute Nubian Expedition (now housed in the University of Uppsala and in the Oriental Institute of Chicago). The database is composed of three tables: one for the amulets, one for the necklaces, of which the amulets are often components, and one for the contexts. Each table includes several attributes that describe the features of the finds and of the contexts where the amulets were discovered. The database allowed me to carry out the typological and a distribution analysis, both in a diachronic and a synchronic perspective, to detect intra- and inter-site variations.

The data described in the database were also used to implement the catalogue with the aim to publish a first complete list of the amulets collected by G. A. Reisner that had been forgotten for more than a century in the storerooms of the museums, thereby making information on these objects available to the public and scholars alike.

In this paper I would like to describe some of the results from my PhD research. Some considerations will be made regarding production techniques and materials, the most common types identified and the role of the amulets within the religion of the Kerma culture.

Type of amulets	**Ancient Kerma**		**Middle Kerma**				**Classic Kerma**						
	K N	CE 4	CE 10	CE 13	CE 15	KM 48	K B	K II	K III	K IV	K X	K XV	K XVI
Hawks			1								3		6
Sphinx										2	1		
Scorpion											2		
Hippopotamus											2		1
hes vases											14		
Bottle											3		1
Amulet-beads						1	1	1	121	425	242	159	661
Teeth					1								
Mother of pearl pendants	19	1		1									
F*aïence* pendants								1					
Flies							2		2	2	2		
Scarabs - scaraboids								1	2	1	4		2

Table 1. Distribution of the amulets and *amulet-beads* found in the Eastern Cemetery of Kerma.

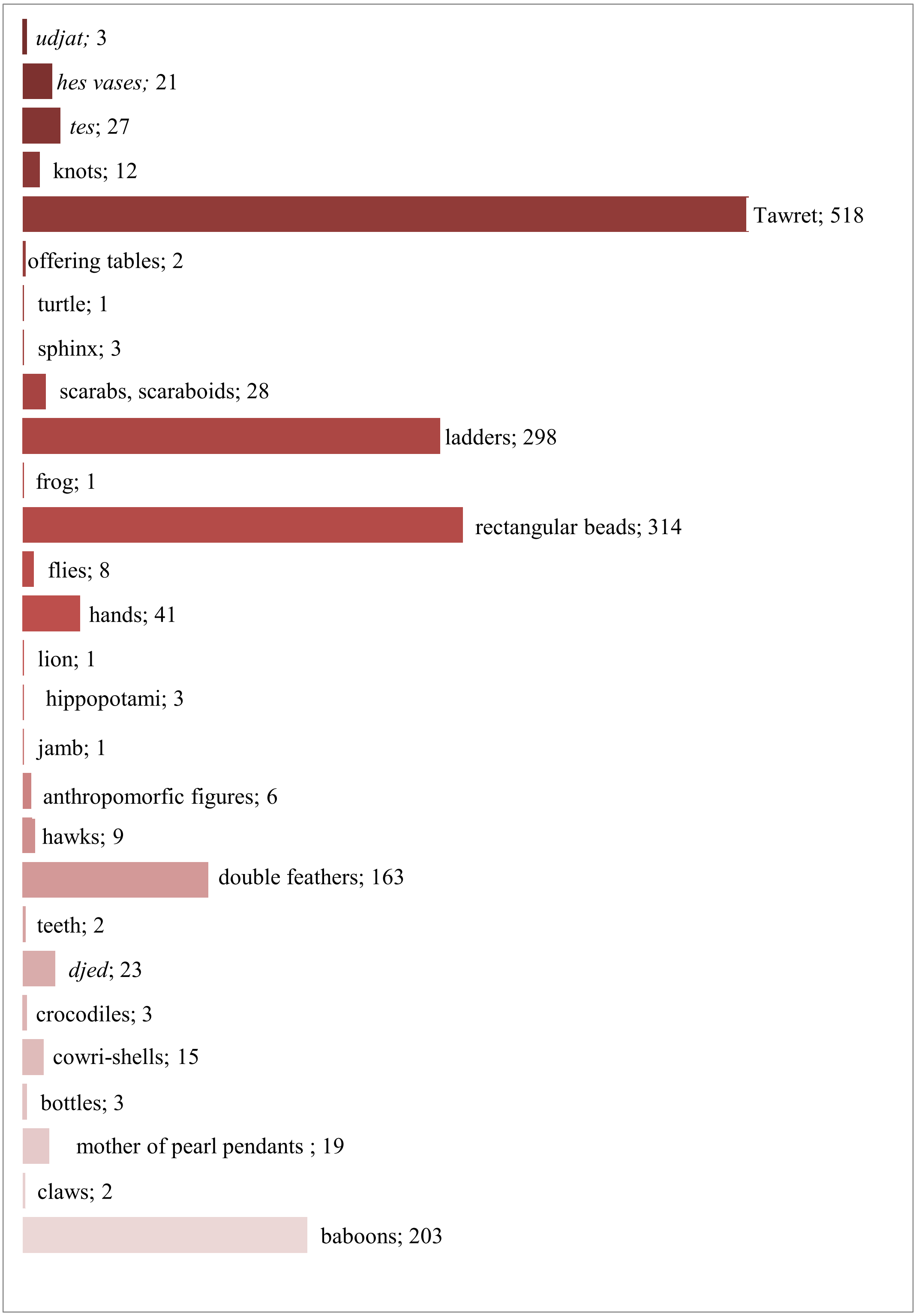

Chart 1. Number of the different types of amulets and *amulet-beads* found in the Eastern Cemetery of Kerma.

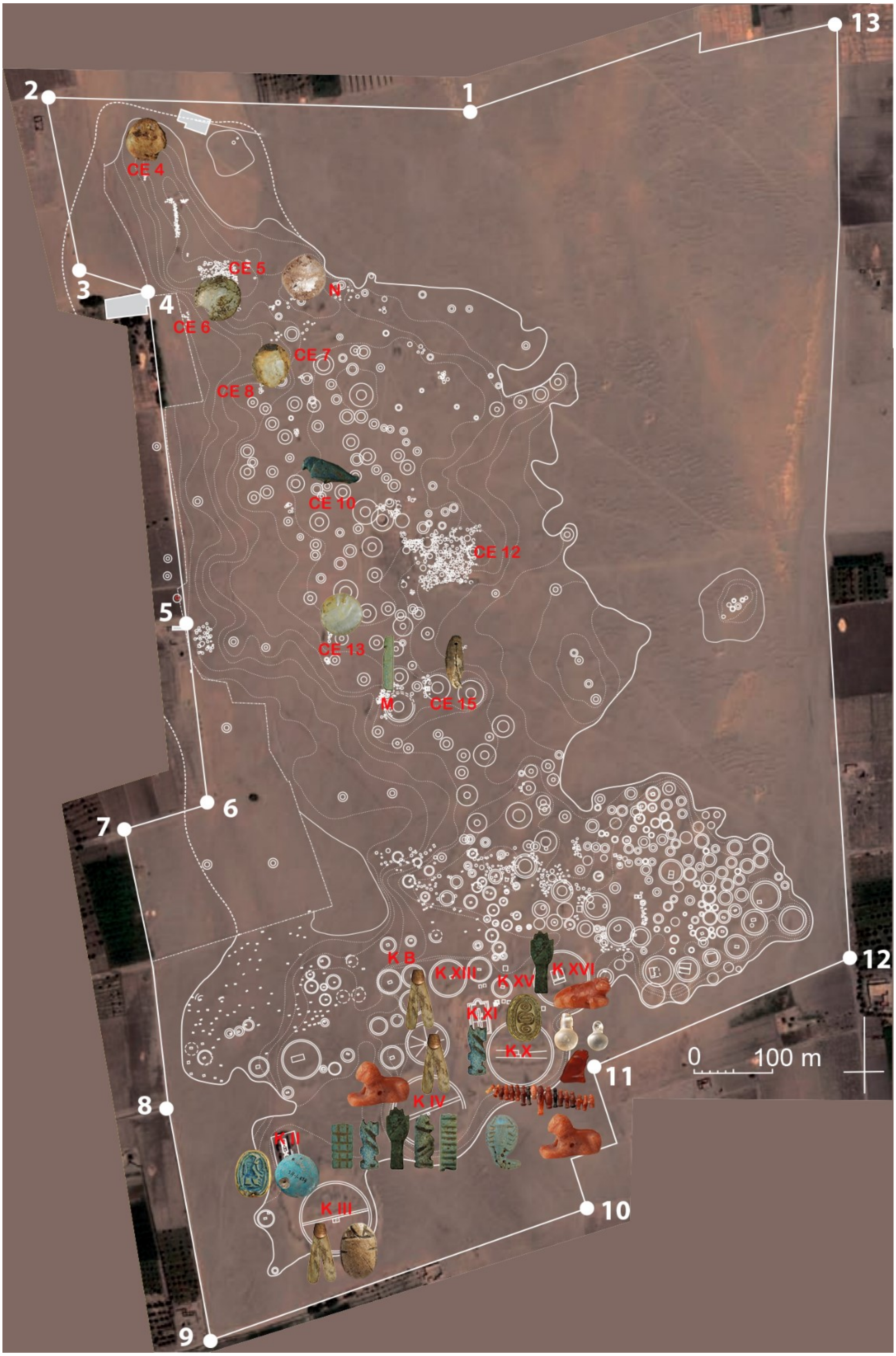

Figure 3. Distribution of the amulets and *amulet-beads* found in the Eastern Ccemetery of Kerma (adapted from Honegger 2010: 28, Fig. 25).

Understanding the Kerma amulets

Amulets are a window into the past, giving us a glimpse of the material culture of a civilization: they give us insights into Kerma's social hierarchies, religious beliefs, technological capabilities and exploited natural resources, reveled by the materials available to its artisans (Markowitz, Doxey 2014, 11).

The study of the large quantity of amulets discovered in the Kerma tombs combined with study of the cemeteries and grave goods, comparison of the symbols represented by the amulets with the other figurative representations of Kerma, such as the decorations made of ivory, bone, mica and *faïence* decorating funerary beds and caps, has provided important information about the symbols and animals that were believed to have a protective powers, helping us to understand some aspects of the Kerma religion.

An amulet is a personal ornament which, because of its shape, the material from which it is made, or even simply its colour, is believed to endow its wearer with certain magical powers or abilities. At the very least it would have been thought to offer some kind of magical protection (Andrews 1994, 6). It immediately became clear that in the Kerma Culture, the amuletic role of adornment was of paramount importance: the materials used and the forms given to these ornaments were carefully selected to protect their wearers from malevolent forces (Markowitz 2012, 186).

The Kerma culture did not have a written language so we can only infer meanings given to their amulets. Making even more complex our interpretation is the fact that most of what survives today has come from the Kerma cemetery, and it is difficult to ascertain whether the amulets found there were worn by the livings, or if they were made solely to accompany the deceased in the afterlife.

We have to consider that it can also be difficult to determine exactly how people wore their jewelry because most of the tombs were looted long ago, their contents disturbed and scattered. What survives today in the storerooms of the aforementioned museums, is only a fraction of the jewellery created and worn at Kerma.

Amulets were an essential adornment, especially as part of the funerary equipment for the dead. Some of the deceased and sacrificed individuals in the Kerma cemetery wore beaded jewellery, or cloth garments made up of a large number of schematic *faïence amulet-beads*. The majority of these amulets were found in the region of the hips and legs, together with barrel-beads, cylinder-beads, disc-beads and ring-beads (Reisner 1923b, 125). The amulets and other items of personal adornment found with the remains indicate that many of the sacrificed individuals were high-status members of the royal court.

The *amulet-beads* were an unknown typology in Egypt; these were much more frequent in Kerma however, compared to the amulets that were comparatively few in number although varied in form (Chart 2).

As opposed to the amulets that were pierced sideways through the upper part and used as pendants, the *amulet-beads* were pierced lengthwise and appear to have been used on a strand of beads (Reisner 1923b, 89-133).

The *amulet-beads* were combined with other beads in circlets, wristlets, necklaces and formed patterns on garments. A significant number of sacrificial victims wore a circlet of one or more strands of small blue *faïence* ring-beads and *amulet-beads* around the head, passing across the forehead; the wrists and the ankles of the bodies were also adorned with single strands of small ring-beads, as well as more elaborate strings of other beads with *amulet-beads*. One of the most common uses of *amulet-beads* was on garments: the design at the top of leather skirts was often well preserved. A number of girdles, composed of beads and *amulet-beads*, were found around the waist, most of these were attached in some way to a short skirt, although few beading patterns are known because the garments themselves deteriorated and only the beads survived (Reisner 1923b, 89-104).

The majority of the amulets, particularly the schematic *faïence amulet-beads,* were of types not known from Egypt, which suggests that they were produced in local workshops.

The materials used in the manufacture of amulets at Kerma were precious metals, such as gold and electrum; hard stones, such as carnelian, rock crystal, steatite and amethyst; other natural materials, like shells and ivory, as well *faïence* (Chart 3).

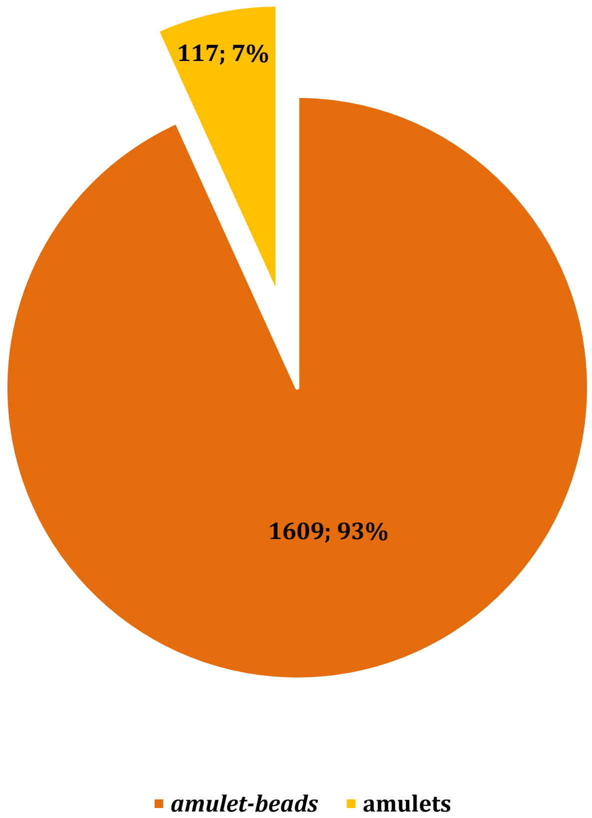

Chart 2. Frequency of amulets and *amulet-beads* in the Eastern Cemetery.

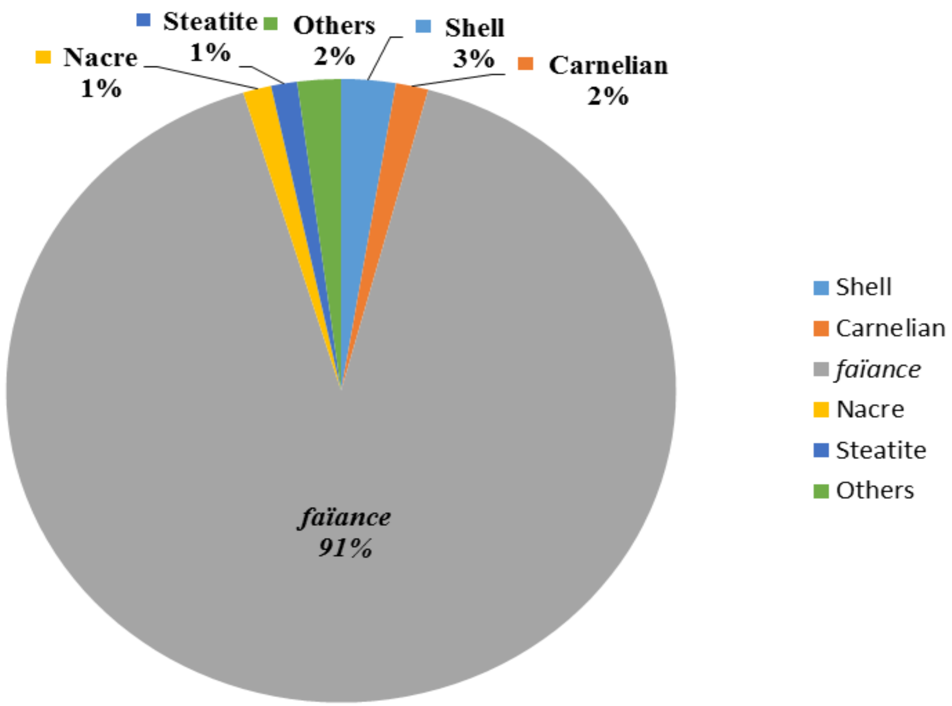

Chart 3. Materials used in the manufacture of the amulets in the Eastern Cemetery of Kerma.

Faïence was the most commonly used material of all for *amulet-beads* but rarely used for scarabs and other amulets.

Faïence ornaments, previously imported from Egypt, were, by the Classic period, made locally (Markovitz, Doxey 2014, 97). The site of Kerma is widely regarded as a centre of *faïence* production, although there is no evidence of large-scale production (Nicholson, Peltenburg 2000, 182). G. Reisner made reference to the existence of *faïence* kilns, as he had found a series of glazed quartz pebbles thought to have served as support for the firing of *faïence* objects at Kerma. The probable kiln structures, "too damaged to be drawn" (Reisner 1923b, 135), appear to have been made from a truncated pottery vessel, or perhaps clay cone fired *in situ*, a practice known to have existed thanks to the so-called bread ovens at Amarna and elsewhere (Nicholson, Peltenburg 2000, 182). G. Reisner suggests that the structure was heated from the outside, implying that the clay vessel served as a kind of *saggar* or separator, preventing the glazes from becoming damaged by ash (Reisner 1923b, 135). There is evidence for the application of cementation glazing and G. Reisner believed that the efflorescence glazing was also used (Reisner 1923b, 174-175).

Some scholars have suggested that the local production of *faïence* in Kerma was based on the reuse of imported *faïence* pieces from Egypt, used as raw material (Lacovara 1998, 48-49). However I would propose that the possible existence of kilns and other evidence of manufacture, including the presence of wasters, might be taken to suggest local production of *faïence.*

G. Reisner believed that all beads and *amulet-beads* were modelled free-hand without the use of any mould (Reisner 1923b, 91). I would, however, suggest that the *amulet-beads* were produced by using matrices. This is supported by the standardization that characterizes these objects, the presence of several *amulet-beads* of the same type, with the same iconography, the same dimensions and the same details. In my opinion the manufacture of the *faïence amulet-beads* was conducted with moulds: the paste was pressed into open moulds and baked in a kiln (Tite *et al*. 2008, 58-59).

We know in Egypt that *faïence* was chosen amongst other purposes for funerary and ritual contexts, and was associated with "light, rebirth and fertility" (Patch 1998, 43). Unfortunately, with no written sources to confirm this at Kerma, we can only hypothesise that *faïence* had the same meaning there as it did in Egypt.

Typological analysis: the most common iconography

Among the most common amulets in the capital's cemetery, some iconographies are comparable to Egyptian motifs, whereas other seem to be peculiar to Kerma production and possibly reflected local beliefs.
During the Classic period, although the shape of some amulets imitated Egyptian ones, such as Tawret, and the *djed* pillar, in most cases it is also evident that these amulets were made locally as well as they undoubtedly appear to be of Nubian production. This can be illustrated by the example of the *djed* pillars found in the Kerma cemetery. These were much more stylized than their Egyptian counterparts, without the dorsal pillar. They did not have a base and there were three or four horizontal lines (in Egypt four lines were obligatory).

Hippopotami

During the Classic period it is obvious that Kerma adopted Egyptian iconography, it is also true, however, that Nubian traits are evident. This is apparent in the representations of the hippopotamus goddess Tawret, one of the most popular *amulet-beads* in the Kerma cemetery. Most of them were found in the tumuli dating to the Classic period[1] (Fig. 4, Table 2).

In the ivory inlays that decorated the panels of the funerary beds, Tawret was represented both with her Egyptian form, with the body of a pregnant hippopotamus, with lion's paws and the tail of a crocodile, or

[1] 9 Tawret in K 404 (MFA 13 5714); 12 in K 1031 (MFA 13 4114); 34 in K 1600 (NMS 1002); 16 in K 311 (NMS 1004); 18 in K XVI C (NMS 1005); 24 in K 453 (NMS 1003); 2 in K III A (NMS 1006); 1 in K 331 (NMS 1255); 21 in K 338 (NMS 1000); 3 in K 323 (NMS 1260); 2 in K X B Y (NMS 1262); 5 in K 1045 (NMS 1269); 2 in K 1096; 29 in K 444 (MFA 14 1050); 86 in K XVI C 4 (MFA 14 1168); 22 in K 1033 (MFA 13 4127); 8 in K X B PA (MFA 14 1510); 2 in K III (MFA 13 5743); 4 in K 1063 (MFA 13 4117); 12 in K 1604 (MFA 20 1747); 3 in K 303 (MFA 13 5776); 1 in K 1001 (MFA 13 4138); 1 in K 1063 (MFA 13 3978); 2 in K 421 (MFA 13 5750); 1 in K 1424 (MFA 13 4125); 2 in K 1063 (MFA 13 4118); 1 in K 1024 (MFA 13 4125); 2 in K 1095 (MFA 14 3 1149); 30 in K 320 (MFA 14 1322); 105 in K 453 (MFA 14 1607); 1 in K X B (MFA 14 1578); 1 in K M 48 (MFA 15 3 429); 1 in K 1038 MFA 13 4113).

according to local iconography, with a typically Nubian pleated skirt such as those worn by the high-status women (Kendall 1997, 92).

The hippopotamus is also closely connected with the Nubian environment. It was particularly popular for its ivory and for its skin. The hippopotamus undoubtedly had an ideological value in Kerma, both as an animal and as Tawret, associated with rebirth and regeneration no doubt because it lived in the renewing waters of the Nile (Arnold 1995, 33, n. 35; Kendall 1997, 88-92; Malek 2003, 128). It was part of the decorative depictions in *faïence* of the façade in the royal funerary chapel K XI. Here, hippopotami are predominant in the second entrance room, marching northward in rows and files on the western wall and both stone doorjambs in the same chapel. Forty-two red hippos are preserved on the west wall (Bonnet 2000, 72, 164). The hippopotamus, together with the crocodile, was the only wild species represented not only by the amulets[2], but also by a large number of clay figurines and *faïence* statuettes found in Kerma (Reisner 1923b, 128) both imported from Egypt and locally produced (Ferrero 1990, 133). Two fragments of a hippo-shaped *faïence* tile were found in K II (Bonnet 1990, 212, n. 260). If the full animal form of the hippo seems occur only in the funerary complexes of the rulers, while the anthropomorphic hippo figures were used on private funerary beds: Tawret bed inlays, mica appliqués and amulets were found in elite graves (Reisner 1923b, 273).

The widespread use of the hippopotamus motif at Kerma shows that this animal had a special symbolic status. Tawret, considered to be a powerful goddess of fertility, was probably incorporated into pre-existing local beliefs during the Classic period. The protective role of the goddess was also adopted by the Nubian community, evident from the fact that she was often depicted with a knife in hand or with bared teeth, emphasizing her apotropaic features (Minor 2012, 180).

Furthermore, the depiction of Tawret with a pleated skirt on the inlaid bed of a Kerman women (Reisner 1923a, 342-343, 227-229)[3] attests to the association of the high-status Kerman women with the goddess (Minor 2012, 176). Unfortunately, in most cases it is not possible to confirm the association of women with *amulet-beads* that represented Tawret, as the sex of the deceased wearing these *amulet-beads* often cannot be determined. We can therefore only hypothesize that these *amulet-beads* were usually associated with women.

Scarabs and scaraboids

Scarabs and scaraboids were worn on the body, serving as a funerary offering and amulets as well as being used in daily life as seals for trade in the Classic Kerma. Reisner excavated 104 examples of scarabs and scaraboids made of glazed steatite, assorted hard stones, *faïence,* ivory, wood and blue-glazed quartz (Reisner 1923a, 37, Pl. 2-3; 1923b, 70, Pl. 40-42).

The majority of the scarabs were Egyptian imports and they were dated to the Second Intermediate Period (Gratien 2004, 77-78), while the examples in ivory, wood and glazed quartz, were produced locally. They were found in private Kerman graves and were often held in the hand of the deceased (Minor 2012, 144).

The scarabs and scaraboids interred with individual in the Classic Kerma burials were used as powerful amulets, meant to protect the deceased. The large concentration of scarabs and scaraboids in the cemetery would appear to confirm this belief. As was the case in Egypt, at Kerma these amulets were probably associated with solar symbolism.

When scarabs were found *in situ*, they were grasped in or near the hands of the deceased individuals or integrated into a beaded garment: sixty-one scarabs and scaraboids were found within the four main Classic Kerma tumuli (Reisner 1923b, 81-84). It should be also remarked that at least three of the deceased individuals who wore a pleated leather skirt also held a scarab or scaraboids in their hands and were probably female (Minor 2012, 145)[4].

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[2] One carnelian amulet with the realistic figure of a hippopotamus, lying down on its left side with its head turned to the right. Noteworthy for the presence of two holes, it was pierced lengthwise and crosswise. Found in K X B 147, neck QB (MFA 20 1734).

[3] Tombs n. K 1053, K 439.

[4] K 417 body A held "between hand and face" ivory scaraboid (13-12-222) (Reisner 1923a: 210); K 1053 body D held "in or on right hand" gold wrapped Egyptian glazed steatite scarab (MFA 13.4111/Su 1094), (Reisner 1923a, 343); K 1603 body E, in skirt held serpentine scaraboid "on right wrist" (14-2-394) (Reisner 1923a, p. 404). Gender determined by Dr. Judd's osteological study of the Kerman human remains. The evidence strongly suggests that only Kerman women wore these pleated leather skirt (Judd, Irish 2009).

The case of the high-status woman holding a gold-wrapped Egyptian blue-glazed steatite scarab in her right hand buried in K 1053 is particularly remarkable (Reisner 1923a, 342-343)[5]. The Kerman woman was dressed in a distinctive skirt, just like the image on the underside of the scarab, a striding kilted figure who wears a pointed kilt, holds a staff, and stands on a *neb* sign (Fig. 5). These insignias may have been used for related sealing tasks, possibly indicating the identity of the sealer, in association in some way with the role of this woman in Nubian society (Minor 2012, 145).

This scarab, imported from Egypt, although the gold surround may have been added by a Nubian craftsman, was part of a necklace composed of a carnelian hawk, stone teardrop-shaped beads (Fig. 5), known to be typically Egyptian and thus most likely imported (Aldred 1971, 41-42), and amethyst barrel-beads. The kilted figure on the scarab was originally meant to be male in its Egyptian context, whereas at Kerma it is held by an important woman whose skirt is part of her symbolic personal adornment.

This exceptional necklace represents an example of how the people of Kerma reinterpreted the meaning of Egyptian imports.

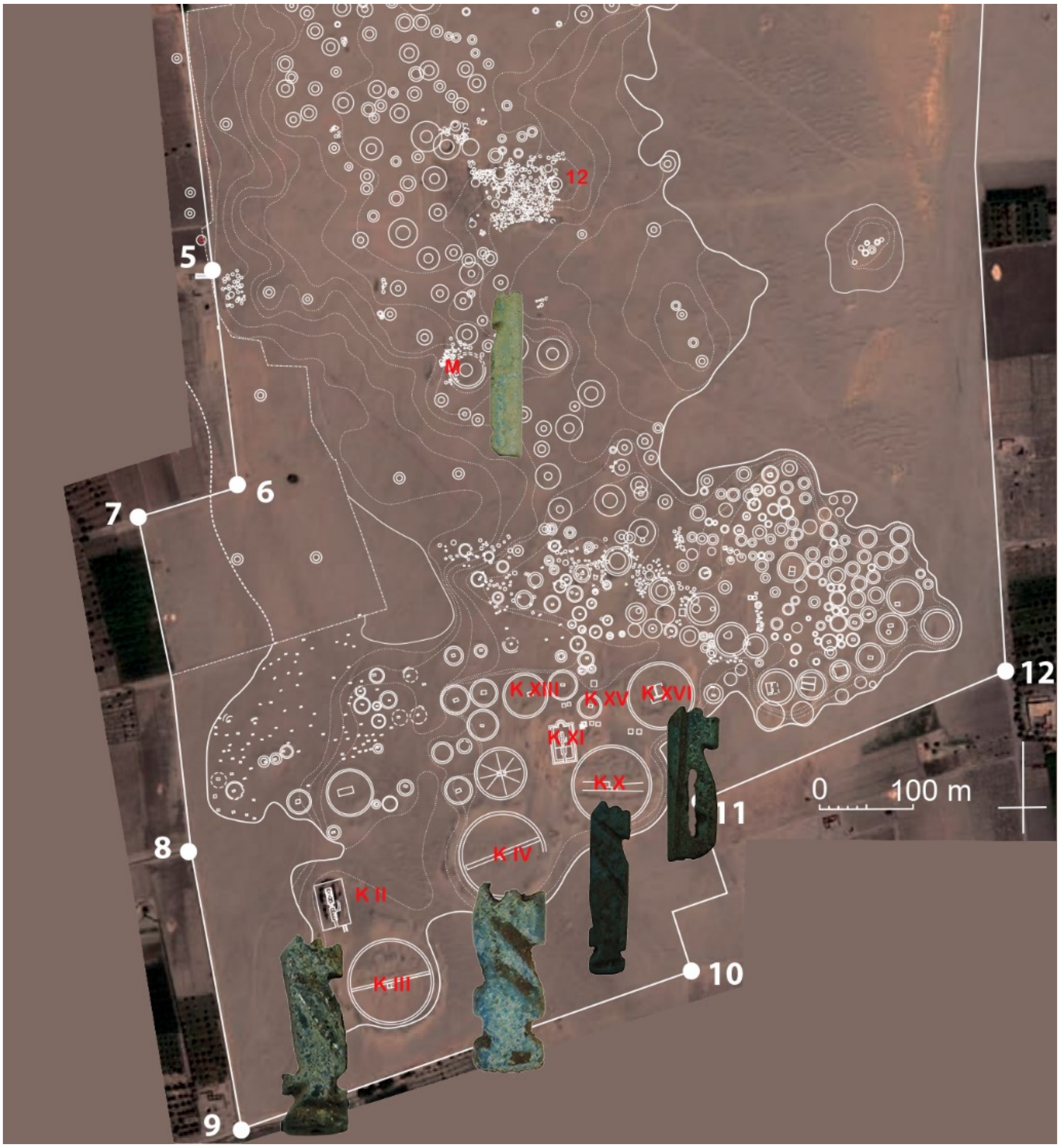

Figure 4. Distribution of the *amulet-beads* that represented Tawret in the Eastern Cemetery (adapted from Honegger 2010: 28, Fig. 25).

Of the 200 individuals that were identified by Judd's study of Reisner's excavations, eight females and no males had preserved leather skirts.

[5] MFA 13 4111/Su 1094, Su 1095.

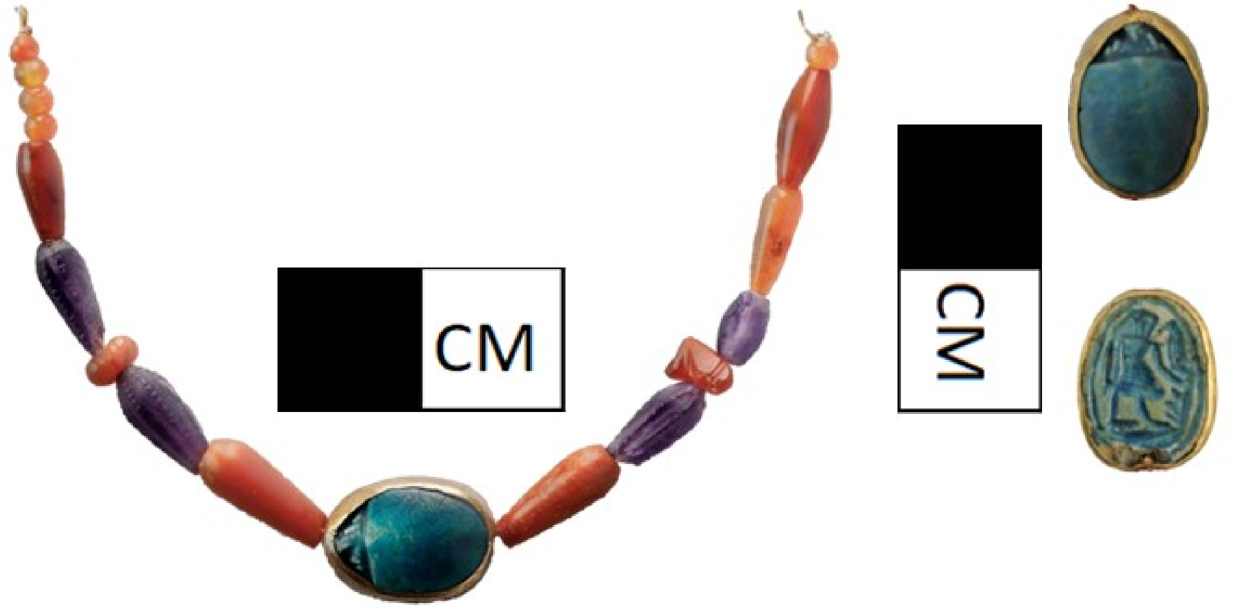

Figure 5. Gold-wrapped scarab held in hand of female burial, K 1053 (MFA 13.4111/ Su. 1094, Su. 1095) Photograph © Museum of Fine Arts, Boston.

Ladders

Several *amulet-beads* which Reisner interpreted as the hieroglyphic sign *aa*, representing a door, were some of the most common *amulet-beads* found in the capital's cemetery (Reisner 1923a, 123) (Fig. 6, Table 2). However, I believe that these *amulet-beads* represented a ladder, an ascendant element connected to the solar cult which was probably widespread at Kerma[6] (Kendall 1997, 76-77; Bonnet 2000, 120; Valbelle 2004, 248, 360). We know that the three large mud brick religious structures at Kerma, K XI, K II and K I (Western Deffufa), had stairways leading to the roof of the chapels where there was a terrace, which would indicate the execution of rituals connected with the solar cult. This may suggest that an important part of the cult activities directed towards the sky took place there (Manzo 2008, 180-182). In the Classic period, ladders and vertical movement are the typical central focus of Kerman chapels.

Another interesting iconographic element to be considered are the two damaged figures climbing ladders painted on the surface of a sandstone plaque that was found on the stone emplacement near the northern inner wall, i.e. in the sacred focal point of funerary chapel K XI (Bonnet 2000, 91). The positioning of this scene demonstrates that it was important for the funerary cult. These figures were distinct from the others represented in the other scenes in the chapel for their clothing: they wore an animal skin around their waist. In my opinion, the two figures wore ritual clothing and the scene may depict two priests ascending to the roof where they would then perform some kind of ritual related to the solar cult.

These elements support the hypothesis that the ladder had symbolic value in the Kerma religion, it was intended to become the instrument used to ascend to the sky and for this reason it was represented by several *amulet-beads*. They were made locally; as shown by the fact that they are very different from the Egyptian amulets that representing staircases.

These *amulet-beads* were probably connected with a cult found in the capital and not in the Lower Nubian region, where they have not been found.

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[6] 14 ladders in K 338 (NMS 1000); 14 in K 1600 (NMS 1002); 14 in K 453 (NMS 1003); 4 in K 311 (NMS 1004); 6 in K XVI (NMS 1005); 3 in K 323 (NMS 1260); 3 in K 1045 (NMS 1269); 1 in K 1096 (NMS 1268); 8 in K 1038 (MFA 13 4113); 9 in K 1031 (MFA 13 4114); 2 in K 1063 (MFA 13 4117); 4 in K 1033 (MFA 13 4127); 4 in K X B PA (MFA 14 1510); 8 in K 404 (MFA 13 5714); 2 in K III (MFA 14 1546); 27 in K 444 (MFA 1 1050); 24 in K 1600 (MFA 14 1168); 16 in K 320 (MFA 14 1322); 34 in K XV (MFA 14 1335); 3 in K 303 (MFA 13 5776); 84 in K 453 (MFA 14 1607); 1 K X B KJ (MFA 14 1561); 3 in K 1095 (MFA 14 3 1149); 1 in K 1064 (MFA 13 4158).

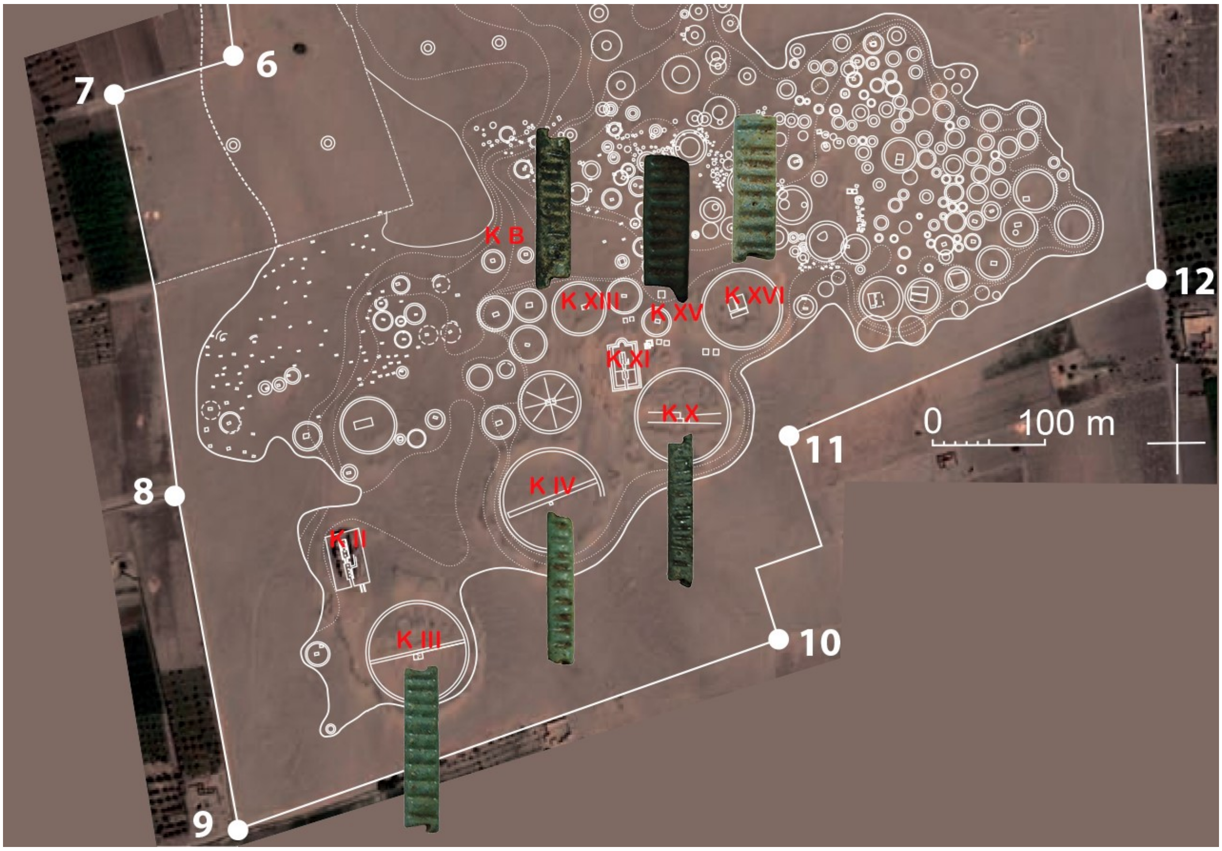

Figure 6. Distribution of the *amulet-beads* that represented ladders in the Eastern Cemetery (adapted from Honegger 2010: 28, Fig. 25).

Baboons

Other *amulet-beads* that appear frequently in the Kerma cemetery, probably connected with the solar cult, were those that represented baboons (Fig. 7, Table 2)[7]. We know that in Egypt these animals were associated with both the sun and moon. The Egyptians seem to have thought that these animals had foreknowledge of the sun's arrival, which they heralded with screams and paw waving. The wide distribution of *amulet-beads* representing baboons may be related to the fact that also at Kerma these animals were considered to be fervent worshipers of the sunrise exactly the same belief as in Egypt then.

Noteworthy, the importance of the sun in the religion of Kerma suggested both by the scarabs, the ladders and the baboons is confirmed by various other elements. From the beginning of the Middle period, some graves contained some goats placed at the southern sides of the grave pits. These animals wore on their heads a spherical topknot of ostrich feathers (Bonnet 1990, p. 90). The inclusion of these animals in the tombs, their peculiar head ornaments, and the red ochre designs sometimes painted on their bodies suggest that they had specific religious or symbolic significance. The spherical ornament possibly represented the Sun disk and this practice could be connected to many rock cravings of the Sahara that showed animals with spheroids on the heads, and with a clay C Group statuette representing a goat with a spherical ornament on its head (Chaix 1993, 161-164; Kendall 1997, 76). The Nubians worshipped the Sun as the main god of their pantheon. During the Classic period, there was the evidence of a ram cult in the Western Deffufa as well as in some tombs. The ram was probably associated with the Sun god, in fact this animal could represent his animal hypostasis (Bonnet 2004, 158-159).

[7] 4 baboons in K 404 (MFA 13 5714); 3 in K 1031 (MFA 13 4114); 15 in K 1600 (NMS 1002); 6 in K 311 (NMS 1004); 8 in K 1600 (NMS 1005); 10 in K 453 (NMS 1003); 2 in K III A (NMS 1006); 5 in K 308 (NMS 1000); 1 in K 1252 NMS 1252); 1 in K 1045 (NMS 1269); 1 in K 1096 (NMS 1268); 12 in K 444 (MFFA 14 1050); 32 in K 1600 C (MFA 14 1168); 1 in K 1038 (MFA 13 4113); 1 in K X B PA (MFA 14 1510); 1 in K 1033 (MFA 13 4127); 1 in K III (MFA 13 5743); 2 in K 1063 (MFA 13 4117); 4 in K 1604 (MFA 20 1747); 2 in K 303 (MFA 13 5776); 1 in K 1024 (MFA 13 4125); 1 in K 1063 (MFA 13 4118); 20 K XV (MFA 14 1335); 1 in K 1063 (MFA 13 3978); 17 in K 320 (MFA 14 1322); 44 in K 453 (MFA 14 1607); 1 in K 400 (MFA 20 1721).

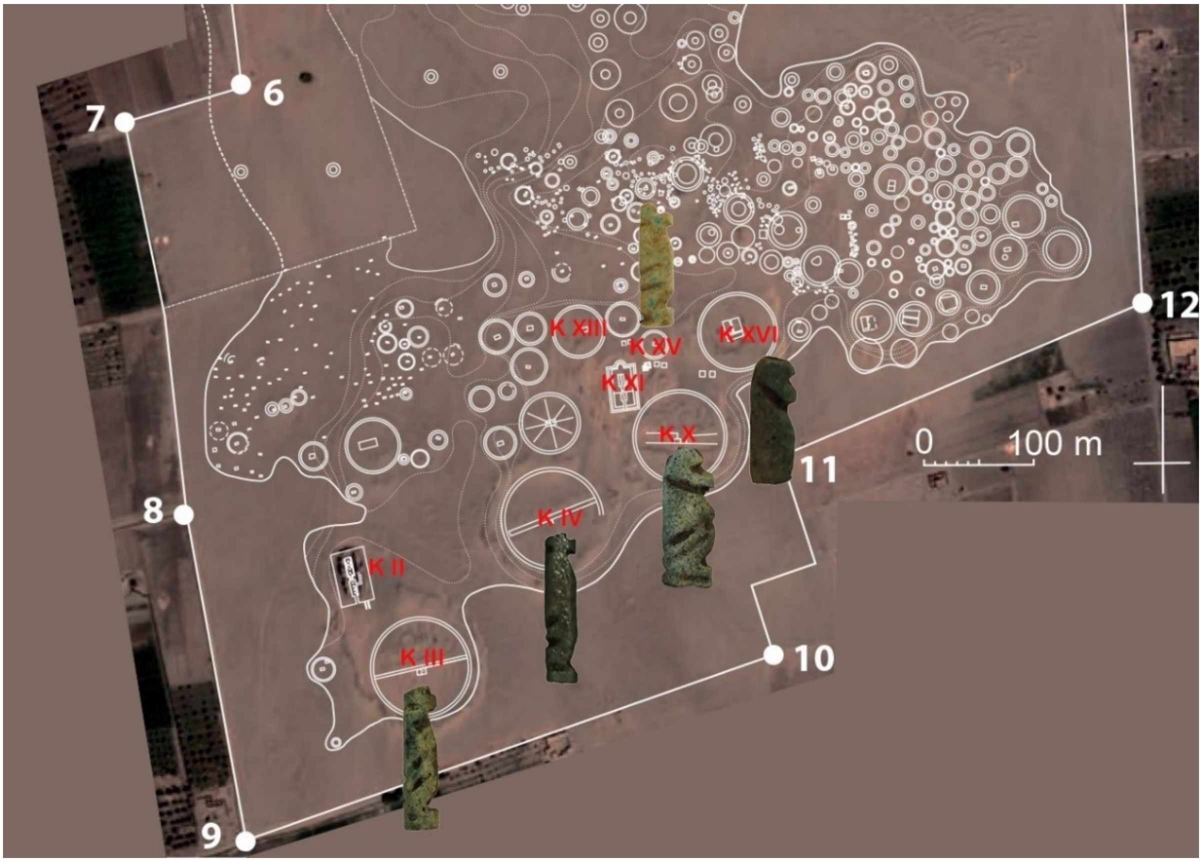

Figure 7. Distribution of the *amulet-beads* that represented baboons in the Eastern Cemetery (adapted from Honegger 2010: 28, Fig. 25).

Amulet-beads	**Middle Kerma**	**Classic Kerma**						**Total number**
	KM 48	**K B**	**K III**	**K IV**	**K X**	**K XV**	**K XVI**	
Ladders		1	40	133	38	34	44	290
Tawret	1		96	196	66		150	509
Baboons			31	72	14	20	59	196

Table 2. Distribution of the *amuet-beads* (ladders, Tawret and baboons) in the Eastern Cemetery.

Conclusion

As previously underlined, the study of amulets can help us to understand some aspects of the Kerma religion. I have also tried to compare the symbols represented by the amulets with the other figurative representations of Kerma, such as the decorations made of ivory or bone, mica and *faïence* decorating funerary beds and caps as well as in the paintings and *faïence* plaques decorating the funerary chapels. Moreover, systematic comparison were also conducted with the Egyptian iconographies. At the end, what seems to emerge is that, although most of the iconographies characterizing these objects rooted in local Nubian traditions, some of them may originated in private Egyptian religious traditions[8] and this was perhaps related also to syncretism.

[8]In this paper, the topic of "private" religion refer to the private magic and to the creatures who appeared on the apotropaic ivory wands of the Middle Kingdom and the Second Intermediate Period, which inspired the iconografic repertoire of the Kerma amulets. The apotropaic ivory wands usually have elaborate incised or carved decoration on one or both sides and animal heads: a jackal or fox's head, at one end, and panther's head, at the other one. The creatures represented include other animals (lions, cats, baboons, bulls, turtles, snakes, scarab-beetles, frogs and crocodiles) but also imaginary monsters such as griffons, a double sphinx or the composite form of Tawret. In brief they are decorated with some of the earliest representations of a whole range of supernatural beings and divine manifestations (Pinch 1994, 33-42). The circulation of amulets and other magic objects - suggested by the presence

This syncretism seems to be emphasized during the Classic Kerma period, perhaps unsurprising within the framework of a broad network of contacts that characterized this period. As far as the amulets are concerned, some are a direct result of inspiration from the iconographic repertoire of Egyptian private religion of the Middle Kingdom, as in the case of Tawret. It can be argued that the Nubians of Kerma came in direct and intense contact with private forms of the Egyptian religiosity precisely through the Egyptian residents in Lower Nubia. In fact, during the Second Intermediate Period, not only the kingdom of Kush controlled the Lower Nubia fortresses established by the Egyptians in Middle Kingdom times, but some of the Egyptian officials served the Kings of Kush, and continued to work in the local administration and may have participated in the long-distance trade between Kerma, the Hyksos and the Theban kingdom (Török 2009, 103-117). The archaeological and epigraphic evidence from Lower Nubian settlements and cemeteries, especially from the forts of Askut and Buhen, or the Kerma settlements and cemeteries in the Saras area, describe communities in which Egyptian, C-Group, Pan Grave and Kerma groups lived together. This region with mixed populations certainly represented a space of mutual acculturation, as suggested by the fact that at Askut and other places in Lower Nubia the private cult shows a syncretic combination of the influence of Egyptian private religiosity and Nubian fertility cults (Smith 1998, 219-230). Interestingly, in the meantime, traces of contacts with the iconographies occurring in official Egyptian religious contexts such as the temples do not occur in the *corpus* of the Kerma amulets.

Therefore, the amulets and their iconographies reflected the new political status of regional power of Kerma, whose subjects also included Egyptian people living in Lower Nubia, and is characterized by strong political and economic ties with the Hyksos (Török 2009, 103-117).

It should be stressed that in the Kerma cemeteries located in Lower Nubia such as Debeira east, Abka, Kumbur, Saras, Ukma and Mirgissa certain kinds of amulets that were very common in the capital city, such as the ladder, were not present (Chart 4).

Therefore, these particular amulets were probably associated with a cult that was rooted in the capital, but not in Lower Nubia. It seems that in this region Kerma adopted a tolerant policy regarding its new subjects (Török 2009, 103-117), and for this reason this region continued to be linked to local regional traditions characterized by many Egyptian elements.

To sum up, also the study of the amulets and their iconographies confirms that the articulation of the pantheon of Kerma could reflect the multi-ethnic composition of a kingdom that, as also suggested by C. Bonnet, is very evident in the architecture of the town and in some sacred structures. This may be for example from the case of the circular chapel, located immediately outside the *temenos* of the Western Deffufa (Bonnet 2004, 117, 150; 2009, 106). The recent excavations conducted by C. Bonnet in the ceremonial area of Dokki Gel, 1 km north of the city, brought to light rounded structures of the Classic period, that were surrounded by curvilinear fortifications with rounded buttresses, very different from the ceremonial structures around the Western Deffufa (Bonnet 2012, 59-66; 2014a, 236-237; 2014b, 91). As already suggested, these circular chapels of African type may have been used by a part of the population, possibly from southern regions and subject to the ruler of Kerma, who worshipped their indigenous cults. In the meantime, southern elements as well certainly had an influence on the religion of the kingdom of Kush.

These remarks seem to confirm that the religion of the Kerma Culture had a very complex origin: Nubian features combined with Egyptian and southern features are being increasingly recognized within it (Bonnet 2004, 150; 2009, 106; 2014a, 236-237, 253) and that especially during the Classical Kerma period, different deities related to different groups of people with different origins were worshipped at Kerma[9].

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of apotropaic ivory wands in the eastern cemetery of Kerma - could have contributed to the diffusion of some iconographic motives that could have inspired the local artists and the cult of composite deities, such as the goddess Tawret. This deity occurs in amulets as far back as the end of the third millennium BCE but rarely appear in the paintings or reliefs of non-royal tombs before the sixteenth century BCE. The composite form of Tawret - represented on the apotropaic ivory wands - provides an early example of the practice of combining all the ferocity and the protective powers of a deity in only one image.

It should be stressed that in Egypt for most of the period during which the apotropaic ivory wands were made (c. 2800-1650 BCE), the access to the state-run temples of the major gods was limited to the priesthood. But ordinary people seem to have enjoyed a closer contact with their gods during magical rites. It is perhaps significant that the apotropaic ivory wands disappear at around the time the great state temple became more accessible to ordinary people (Pinch 1994, 33-42).

[9] The presence of groups of people of different origins is also supported by the stable isotopes analases of human remains from the cemetery of Kerma (Thompson *et al.* 2008, 385).

Moreover, as shown by the emphasis on solar elements, the iconography of these objects is apparently not accidental but rather the result of a selection among the then present foreign and local customs.

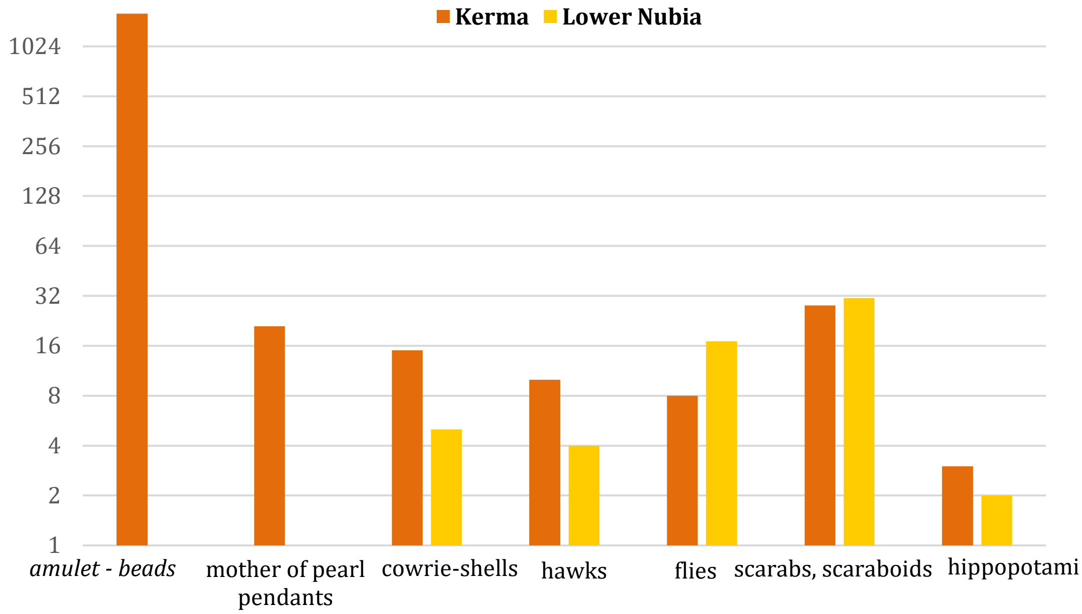

Chart 4. Distribution of amulets inthe Kerma cemeteries located in Lower Nubia.

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Tahai's Secret: a Closer Look at the Coffin Ensemble of Lady Tahai from the 'Antikenmuseum Basel und Sammlung Ludwig' in Switzerland

Charlotte Hunkeler

Introduction

The museum of antiquities in Basel, Switzerland (Antikenmuseum Basel und Sammlung Ludwig) houses a coffin ensemble containing a cartonnage case (BSE III 129a; Fig. 1) and an anthropoid wooden coffin (BSE III 129b/c) dating from the 22nd dynasty (c. 940–720 BCE). This ensemble is on loan from the 'Museum der Kulturen Basel'. The latter museum received it as a gift from F. Ott and Ch. Tschudy-Merkle in 1885, who purchased it in Alexandria (Museum der Kulturen, conservation archive 23/02/1998). The provenance of the ensemble is, however, unknown.

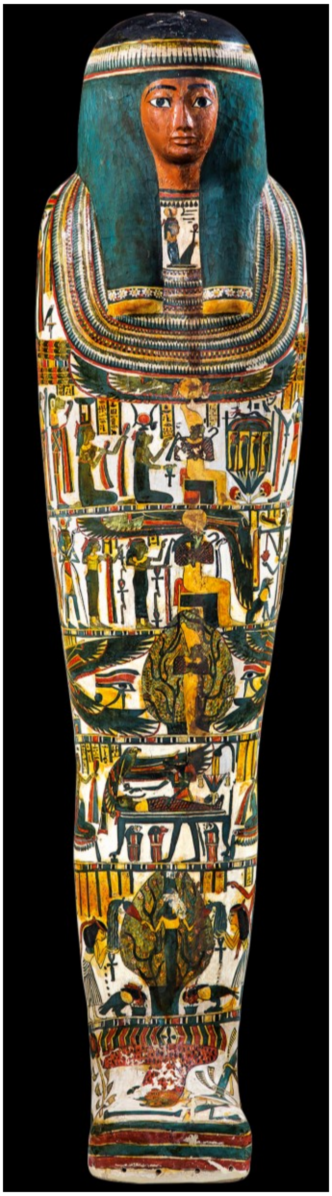

Figure 1. Tahai's cartonnage (photograph by Ruedi Habegger Basel, AMB).

There are iconographical indications on the cartonnage that suggest either a Theban origin (the tree-goddess, Brech 2008, 91) or a provenance from Akhmim (Osiris in the Tree, Taylor 2003, 105). On the coffin, the name of its owner, Tahai, is inscribed. The intact cartonnage case was x-rayed in the 1970s. This investigation revealed the severely damaged mummy of a woman in her mid-thirties: her hands and feet were cut off and her head is completely missing (Graf 1978, 19). But not enough with this mystery – a closer look at the decoration of the cartonnage case inspires more questions about the person it was manufactured for. There are indications that the ensemble was originally manufactured for a different person than it was eventually used for. The brown painted face of the cartonnage case and the representation of the deceased in a kilt rather than a typical female dress suggest that the cartonnage case was either originally manufactured for a male owner or that the distinction between female and male decoration schemes was not considered important anymore. In the present paper, besides looking at the circumstances of other mutilated mummies, the iconographical details of Tahai's cartonnage case that may answer some of the questions raised above are investigated more thoroughly.

Historical Background

A considerable amount of tomb looting had already taken place by the end of the New Kingdom, and it continued in the beginning of the Third Intermediate Period (van Djik 2003, 301). Coffins were emptied to be used again (Cooney 2014 and 2015). The introduction of cartonnage cases in the beginning of the 22nd dynasty seemed to guarantee a more secure protection of the body, because it acted like a cocoon around the mummified body. As the remains of mud and straw on the inner side of various cartonnage cases demonstrate, a nucleus in the shape of a mummy, built out of these materials, was created first. The nucleus was then coated with a layer of stucco before being wrapped in several layers of linen soaked in glue. Once a rough mummy-formed shell was established, but before it was totally dry, a vertical slit was cut along the middle of the back, from the feet to the top of the head (Fig. 2).

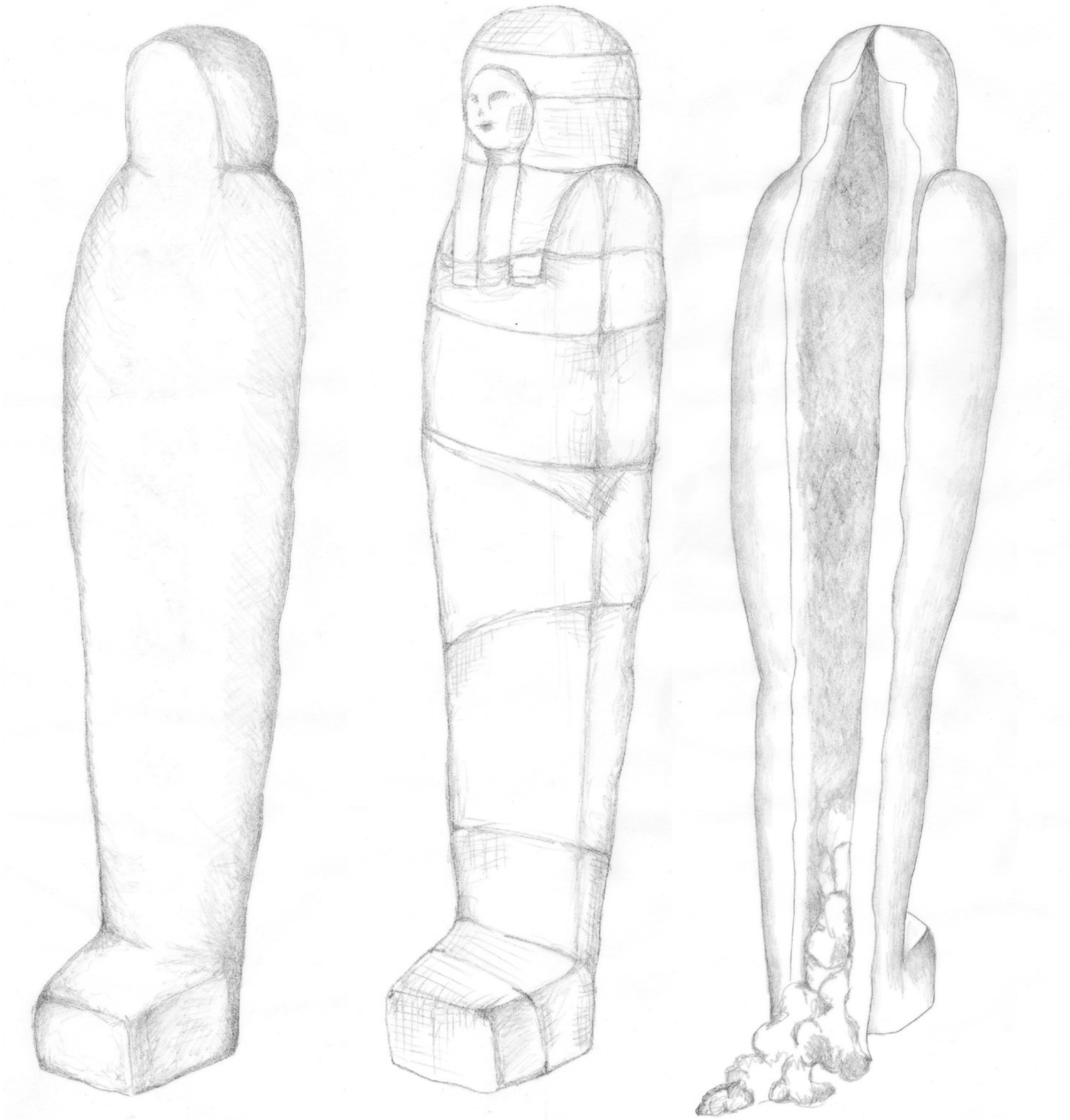

Figure 2. Manufacture of a cartonnage case according to Taylor (drawings by Charlotte Hunkeler after Taylor 2011, 154).

This slit allowed the shell to be opened wide enough to remove the core and push the mummified body inside. The sides of the cartonnage case were pushed together again and the slit was sewn up. The section below the soles of the feet was covered by a wooden plate, which was stitched to the cartonnage shell (Taylor 2011, 154 and Taylor 1988, 166; Fig. 3).Once the cartonnage case dried completely, fine white stucco was applied over it and served as decorating ground. At that point, it was no longer possible to open the cartonnage envelope to remove the body and reuse the cartonnage. However, the many cartonnage fragments found in tombs demonstrate that looters not only looked for coffins to recycle, but were also interested in the amulets inside the mummy wrappings.

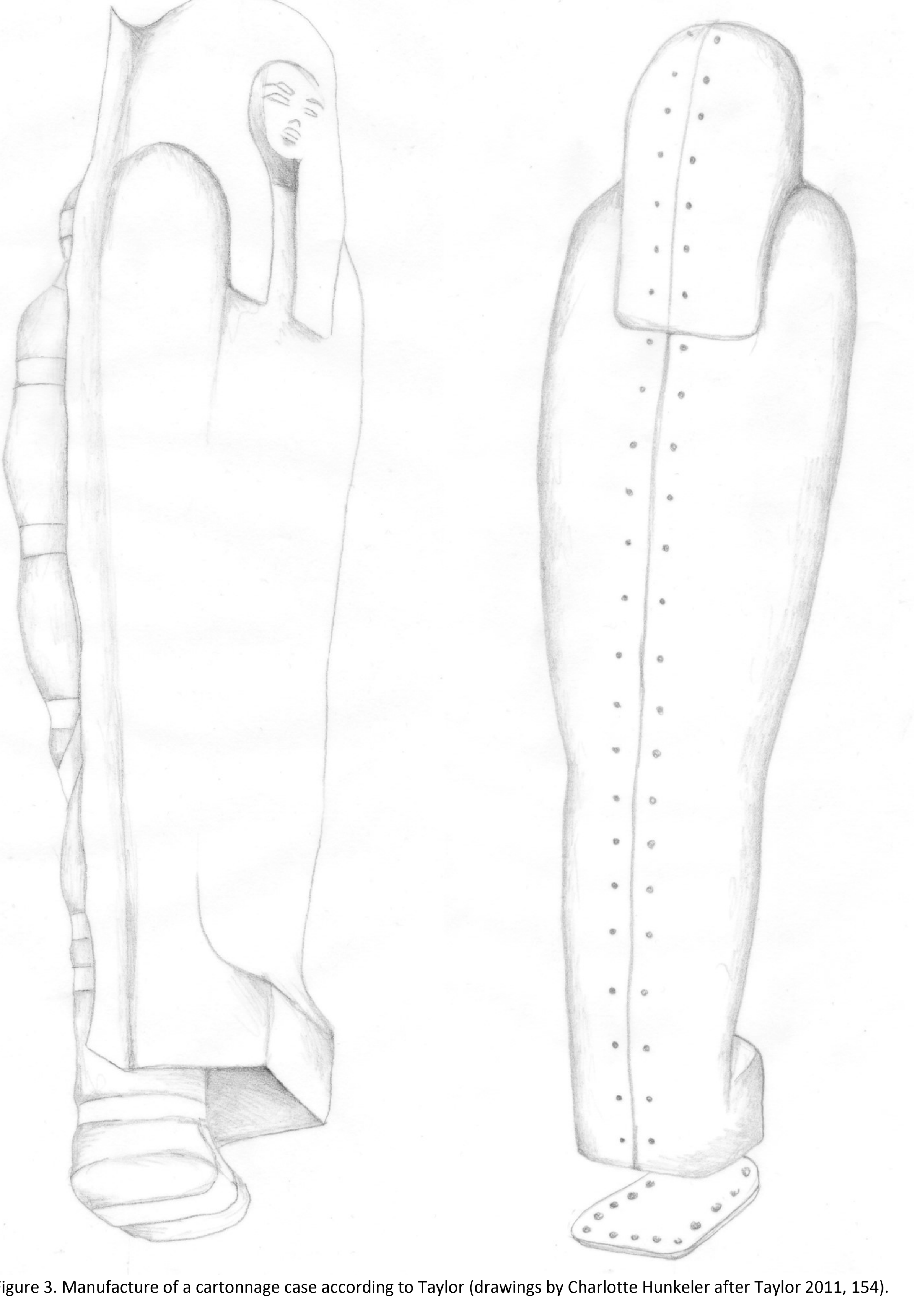

Figure 3. Manufacture of a cartonnage case according to Taylor (drawings by Charlotte Hunkeler after Taylor 2011, 154).

Tahai's Mummy

When Tahai's mummy was x-rayed in the 'Museum der Kulturen' in 1974, Graf and his team discovered that the mummy inside the cartonnage case is severely damaged (1978, 19). The front of the mummified body faces the back of the cartonnage. The feet were cut off and placed in reverse direction to the body; the cut off hands were placed on her stomach. The left elbow and the left hip were dislocated and the head was removed; it is now completely missing (Graf 1977, 34). It is unclear when the mummy was so severely damaged. It might have happened either during the embalming process or during a modern unwrapping event. Both scenarios will be considered in detail at closer in the following text.

a) Accidents During the Mummification Process

If the priests cut off the arms, feet, and head because the cartonnage case was not big enough, this would be a rather crude way to deal with such a situation. Furthermore, the insufficiently prepared and even mutilated corpse does not accord with the contemporaneous fully developed practice of the mummification technique that allows a life-like appearance (Ikram and Dodson 1998, 124; Riggs 2014, 88). Nor does it fit with the literature of later periods that mention the embalmers' work. Diodorus characterised the embalmers as 'skilled artisans who have received this professional knowledge as a family tradition. [They] are considered worthy of every honour and consideration, associating with the priests and even coming and going in the temple without hindrance, as being undefiled' (Diodorus, Bibliotheca Historica I.91; Riggs 2014, 91). Similarly, Herodotus explained in his *Histories* that violence towards a body was anathema to the Egyptians (Riggs 2014, 91).

Nevertheless, accidents happened during the mummification process and were covered up. In Nesperennub's case, a bowl was accidentally glued to his head. The attempt to remove it was apparently unsuccessful and the priests thus decided to leave it and continue with the mummification process. Eventually, the mummification of the corpse made the mistake invisible and his family probably never learnt of it (Taylor 2011, 50–51). Another accident happened during the preparation of the corpse of an anonymous man found in the coffin of Shepenmehyt (BM EA 22814). During the removal of the brain, the tool probably got lost in the head and was left there permanently (Taylor and Antoine 2014, 56–66). From the outside, nothing seemed to be wrong with the body. Also the CT-scan of Padiament's mummy presented a surprise: the head is attached to the body by two sticks. However, whether the removal of Padiament's head was an accident of the embalmers or was the cause of death is not known for certain. As there is no trauma or decapitation visible in the CT, the former possibility is more likely. In either case, it is clear that the embalmers reattached it to the body. Additional support for the head was given by heavy bandaging and padding around the neck, and the neck area was stabilised by filling the throat with resin (Taylor and Antoine 2014, 105). When the mummification process was finished and the mummy was shoved into the cartonnage case, the funerary staff faced another problem: the mummy was too tall for the case. This problem was solved by enlarging the case (Taylor and Antoine 2014, 109).

It is possible that Tahai's circumstances were similar. The head could have become detached during the embalming process. Instead of carefully reattaching it, the embalming priests might have left it separated. The funerary staff, confused by this situation, might have then put the mummy into the cartonnage case facing the wrong way. As in Padiament's case, the body might have been too large to be placed inside the cartonnage and thus the parts of the body that did not fit might have been cut off as an impromptu decision. This scenario is unlikely, however, given that the hands probably did not take up more space than the arms, and that the body must have been completely wrapped before it was inserted into the cartonnage case. Thus, the hands and feet could not have been cut off so easily, and unwrapping the body in order to do so seems illogical.

b) Damages Incurred During Modern Unwrapping Events

Alternatively, it is also possible that the mummy was taken out of its cocoon in modern times. Such a situation could have occurred at the end of the 19th century AD, after the coffin ensemble was found, or in an unwrapping event. As we have seen before with descriptions by Diodorus and Herodotus, mummies already interested the ancient Greek historians (Ikram and Dodson 1998, 64). Early Greek historians, for example Herodotus, were mainly interested in the mummification technique, whereas later Greek physicians and pharmacologists (e.g. Diodorus), as well as Persian physicians and scientists (e.g. Avicenna), used *mumia* as a medical ingredient. There was confusion between the black resin used for the embalming process and the Persian word *mumia* for bitumen, mineral pitch used for therapeutic reasons. As mummies were thought to have the same therapeutic effect, their demand increased drastically in Europe during the sixteenth and seventeenth centuries (Ikram and Dodson 1998, 64). Because of their healing powers but also because of the fascination with Egyptian antiquities in general, mummies became a demanded souvenir for Europeans visiting Egypt. Della Valle wrote in 1843 in his travel journal: 'Di questa mummia spezzata, volli per me la testa tutta intera ed un buon pezzo di bitume, con una mano di quelle fasce; il resto, perchè mi pareva di averne d'avanzo per i denari che spendeva, lo lasciai tutto a quei poveri contadini, che sogliono in quel modo spezzarle, e venire a vendere la materia in Cairo a coloro che la coprano, con gran guadagno, per mercanzia.'(1843, 202–203; Riggs 2014, 44–45). In Europe, mummies served as entertainment, especially during organised unwrapping events. Anyone who could purchase a ticket took part in such events. Also from Basel unwrapping ceremonies are known and those performed by Balthasar Poertner in 1903 were documented carefully (information received on 22 July 2014 by Dr M. Müller, former curator of the 'Museum der Kulturen Basel'). Although Tahai is not mentioned in these documents, curiosity about what might lie in the cartonnage case might have been strong enough to attempt an undocumented unwrapping.

Most cartonnage cases that underwent an unwrapping event are now either lost or severely damaged (Germer *et al.* 2009). The cartonnage case of Neskhonspekhered (Berlin inv. no. 8284, Germer *et al.* 2009, 109–112) is one of the few cartonnages whose mummies were taken out but not lost. The cartonnage case bears a long crack on the front side, from the right lappet of the wig down to the feet, and seems to have been heavily restored. Although there are no pictures available of the back of the cartonnage case, it can be assumed that there are further damages visible there. The mummy was so severely damaged during looting for amulets and papyri that the broken remains were disposed off and are now lost (Germer *et al.* 2009, 110). Another cartonnage case of an anonymous woman (Berlin inv. no. 31297, Germer *et al.* 2009, 201–202) has also been heavily restored: the complete face and right shoulder were destroyed during an unwrapping event. Further damages are visible in the middle of the right side and in the area of the feet. The damage on a cartonnage case of the University of Heidelberg (Sammlung des Ägyptischen Instituts der Universität Heidelberg, inv. no. 1014) dating from the 22nd dynasty is described as follows: 'Bei Entfernung der Mumie – nach dem Schädelbefund eine etwa 18jährige Frau – zerbrach die Hülle in zwei Teile' (Ewigleben 2007, 214). The frontal part of the envelope, which was doused with resin, is missing a patch in the facial area and exhibits some cracks on the right side. The two dorsal pieces have several cracks.

As we have seen, the unwrappings of mummies in cartonnage cases, carried out either in search of valuable amulets or out of pure curiosity, was common. In most cases, the damage done to the envelopes during such an event was severe. Complete areas, mainly the facial parts, were destroyed, and the frontal and dorsal parts suffered several minor or major cracks. Although Tahai's cartonnage case seems to be intact at first glance and, making a modern unwrapping unlikely, detailed observation is necessary to exclude this possibility. Hence, a summary of the major conservational treatments is given below. To understand the cartonnage as a whole and to allow further understanding of its history, information about the decoration scheme will be given first.

Tahai's Cartonnage (BSE III 129a)

Tahai's cartonnage follows the decoration scheme of the 22nd dynasty used in Thebes and elsewhere in Egypt. The contours of its tripartite blue wig frame the brown face and no ears are visible. All the lappets end in a yellow band, and the two lappets on the front are additionally decorated with a band of camomile blossoms. Furthermore, a headband made out of blue lotus petals decorates the wig (Fig. 4). However, there is no scarab beetle on top of the head, as would be typical (e.g. Cairo Egyptian Museum SR11319/4). The background of the decorated front and back of the body was kept in the colour of the fine stucco applied to achieve a smoother surface for the decoration and thus reminds one of the *sꜥḥ*-state of the deceased (Taylor 2001, 164–165). The frontal part is separated from the dorsal part by a decorative band. The decoration on the front is divided by block-friezes into five horizontal registers; in three of these, the deceased is entering the hereafter (registers one, two, and four), and in the other two (registers three and five) she is shown in paradisiac surroundings (Müller 1999, 2; Fig. 1). Additionally, the shoulder area and the topside of the foot-case are decorated with symbols of the afterlife (Wiese 2014, 170–171). Between the lappets of the wig, Maat is depicted (Fig. 4).

Figure 4. Detail of Tahai’s cartonnage in the ‘Antikenmuseum Basel und Sammlung Ludwig’, BSE III 129a (photograph by Charlotte Hunkeler).

The back of the cartonnage is divided in the middle by the vertical slit, which is emphasised by a broad decorative band in red and yellow. From the holes on either side of the band, it is clear that the stitching of the slit was confined to this area. The surface on each side of the seam is divided into seven compartments, five of which contain demons. Furthermore, Hathor is emerging from the mountain in one of the compartments and in the one facing the Hathor scene, Shu-Thot, in the shape of a baboon, is sitting on a throne. In each of the two lowest compartments, a Nefertem-fetish is depicted (Fig. 5).

Figure 5. Decoration on the back of Tahai's cartonnage in the 'Antikenmuseum Basel und Sammlung Ludwig', BSE III 129a (photograph by Charlotte Hunkeler).

Inscriptions in all the compartments on the front and in two compartments on the back indicate the depicted deity and often include an offering formula. Almost all of the inscriptions are written in vertical columns framed by blue lines. The hieroglyphs are written in black and highlighted with a varnish cover that turned the background of the column yellow. In some compartments, the black hieroglyphs are broken off and thus not all the inscriptions are clearly legible.

The Condition of Tahai's Cartonnage

According to conservation documents of the 'Museum der Kulturen Basel', restoration work was conducted in 1975 and 1998. In 1975, the cartonnage case and the coffin were cleaned as a first step. Loose fragments were then glued together and hollow areas as well as bigger gaps were filled with Araldit. According to observations in 1998, the face was also retouched in an earlier conservation attempt. In 1998, the cartonnage case was cleaned and several conservational steps were made. Damages were due to unknown fluids that destroyed the lowest part of the backside by loosening the stucco covering from the linen ground as well as loosening the layers of linen from each other. Some kind of liquid also ran along the frontal side of the cartonnage case and left a thin vertical line of blurred decoration. It is unclear when these damages occurred. Along the slit on the backside of the cartonnage case the edges were lacerated; the stucco was crumbly and the linen layers were loose. This damage was especially visible in the middle of the back, where there was an additional horizontal cut that was probably made in modern times. In other places, patches of decoration and stucco were missing or the restoration work of 1975 had to be redone (Museum der Kulturen, conservation archive 23/02/1998; Fig. 5).

The loose linen layers along both sides of the central slit on the back were glued together again. Afterwards, the missing patches were filled with new stucco (Information received from M. T. Pol-Cometti, conservator at the 'Museum der Kulturen Basel' in August 2014). Unlike in the earlier tradition of restoration, most of the surfaces were not repainted. Exceptions are the face and the wig. Several patches of stucco and colour of the wig were missing. These areas were filled and then painted blue. The missing patches in the facial area were restored and painted over in 1975. In 1998, some of the former applications were removed and redone. These areas were painted soft brown so that the difference between restored areas and original paintwork in glossy brown remained visible (Information received from M. T. Pol-Cometti, conservator at the 'Museum der Kulturen Basel' in August 2014). Probably during the first phase of the restoration work, the original footboard was replaced by a modern one (Inv. no. BSAe III 08371). The original footboard is in storage at the 'Antikenmuseum Basel und Sammlung Ludwig'.

In summary, the conservation report shows clearly that the front part of the cartonnage case, apart from the cracks in the facial area, is in very good condition. Tahai's cartonnage case does not contain any of the severe damages typical for cases that were part of unwrapping events (see description above): long cracks, completely damaged areas, or entire parts that were broken off. However, the backside presents a completely different picture. Quite a lot of restoration work had to be conducted there to repair the larger damaged area in the lower part, the lacerated edges along the vertical slit, and the horizontal cut that was most likely made in modern time. If we complete the picture by adding the information about Tahai's mummy–missing head, feet, and hands, as well as the dislocated left hip–a very careful uncasing of the mummy is a very likely scenario. The owner of the coffin ensemble and possibly initiator of the unwrapping ceremony was not only curious about the hidden information and valuables, but also appreciated the value of the coffin ensemble as a whole. Hence, the cartonnage case was harmed as little as possible. Thus, the horizontal cut in the middle of the back, along the dividers of the registers, might have been performed at that time. This cut would have allowed the narrowest part around the ankles to be enlarged enough to pull the mummy out without causing major damage to the front or to the head and shoulder areas. However, this act most likely caused the dislocation of the hip. The cut off hands, feet, and head were very likely the result of the actual unwrapping and studying of the mummy. The head might have ended up in the hands of a private owner or in a pharmacy.

It seems probable that Tahai was the only person buried within the cartonnage case and that the case provided a secure protection of her body until modern time. However, it is still not clear whether the cartonnage case was originally intended for someone else. There are several indications in iconography and inscriptions suggesting that the original intended owner was male.

Indications of a Male Owner

As mentioned above, almost half of the face was restored in 1975 and 1998. Nevertheless, it is still clear that the eyes, mouth, and nose were modelled very carefully. The skin colour is brown (Fig. 4). This information could initially lead to the conclusion that this is the cartonnage case of a man. However, there is not always a strict separation between colours used for men and those used for women on cartonnage cases and coffins, especially during the later part of the Third Intermediate Period. Two such examples, where the faces of women were painted brown, can be seen in the National Museum of Scotland in Edinburgh: the cartonnage case of an unidentified woman (National Museum Scotland, A1911.399.1B) and the coffin of Neskihonsupakhered (National Museum Scotland, A1910.90 A). In the case of Neskihonsupakhered, the rest of the decoration, as well as the inscription mentioning her name and titles, leave no doubt that the coffin was made for a woman. Furthermore, the absence of an attached curved beard of the gods and a blue wig suggest the envelope of a woman. Thus, by itself, the brown face cannot be seen as an indication of a male mummy envelope.

Tahai's Dress of the Living

In the decoration on the frontal side of Tahai's cartonnage, there are unusual aspects that suggest confusion about whether the deceased was male or female. In the lowest register, the prominent and central figure is the goddess in the tree. She is facing to the right, although there are images of the deceased on both sides of the tree (Fig. 6). In both her hands, the goddess is holding a water jug, a so-called *ḥs*-vase, to provide the deceased not only with the shadow and fruits of the tree, but also with the essential water supply (Cooney 2010, 228; Keel 1992, 62; Hornung 1990, 94). In both instances, the deceased is presented in her dress of the living. Thismanner of depicting the deceased is common for libation scenes, as can be seen, for example, on a 22nd Dynasty coffin of Tjentmutengebtju or Tamutin (London, British Museum EA22939). Therefore, it becomes clear that the deceased wanted to be released from the wrappings in the hereafter and to reach the revived state as soon as possible (Kurth 1990, 53; Cooney 2010, 226 and 231). Additionally, the choice of a white dress indicates dignity and purity (Cooney 2010, 230; Kurth 1990, 55; Book of the Dead Spell 171).

Furthermore, the fact that she is transfigured is clear from the red band she is wearing around her head (Kurth 1990, 56; van Walsem 1979, 110). If we have a closer look at how the female dresses were usually drawn, it becomes apparent, that they were either the tight sheath-dresses, as in Tamutin's case, or the even more common voluminous, diaphanous and pleated dresses. Hall describes them as 'a large cloak, or wide rectangular cloth, wound around the lower torso [and] it was draped over the shoulders so that the two weft fringes hung down the front. It was held in place by knotting or a tied sash beneath the breasts' (1986, 22). These voluminous dresses can be seen on various cartonnage cases (e.g. Djedmaatesankh, Toronto, ROM 910) as well as on stelae (e.g. the stela of Nehmesbastet from KV 64 in Adrom *et al.* 2011, 3–4; Bickel 2013, 80) of the same time period. When Tahai's dress is compared with both types of dresses of the living, classification as either type is impossible. Although it is pleated and voluminous, the upper part of the body is not completely covered and the false-sleeves are missing entirely. Furthermore, the dress seems to be too short because the ankles are not covered.

However, if we compare the iconography of the dress to the image of Djedkhonsujuefankh on his coffin (London, British Museum EA 6662), we can see that not only the posture, but also the skirt is very similar (Fig. 7).

Figure 6. Lowest register of Tahai's cartonnage in the 'Antikenmuseum Basel und Sammlung Ludwig', BSE III 129a, showing the scene with the tree-goddess (photograph by Charlotte Hunkeler).

Djedkhonsujuefankh might even be depicted with his upper body covered (Fig. 8). The similarity might lead us to the conclusion that a male deceased was depicted first and, in a second step, provisionally changed into a female one by enlarging the wig. This confusion between male or female owner can also be observed with the depictions of the *bꜣ*-birds in between the goddess of the tree and the deceased: one of the *bꜣ*-birds is wearing the short beard of the living men. This feature is interesting because the depicted *bꜣ*-bird usually takes the gender of the deceased (Cooney 2008, 17).

Figure 7. Drawing of the iconography of Tahai (part of the scene with the tree goddess; 'Antikenmuseum Basel und Sammlung Ludwig', BSE III 129a) and drawing of Djedkhonsujuefankh (also part of the scene with the tree-goddess; British Museum EA 6662) (drawings by Charlotte Hunkeler).

Figure 8. Drawing of the iconography of Tahai (part of the scene with the tree goddess; 'Antikenmuseum Basel und Sammlung Ludwig', BSE III 129a) and drawing of Djedkhonsujuefankh (also part of the scene with the tree-goddess; British Museum EA 6662) (drawings by Charlotte Hunkeler).

Tahai Presented as an Osiris

In three registers, Tahai is depicted once as a male figure when shown as an Osiris (register four), and three times with his attributes (registers one and two). In the fourth register (Fig. 9), Anubis is the actual deity and depicted in the centre, he is neither wearing the mummy shrouds nor is his face green. These godly symbols are devoted here to the deceased: Tahai's body is completely covered by the red shroud and bead-net. Her face is green and she is wearing the curved beard of the gods. The iconography of Anubis, as well as his position in the image, sets him in the background of the scene. At the same time, Tahai, presented as Osiris, becomes the focal point of the compartment.

Figure 9. Detail of Tahai's cartonnage in the 'Antikenmuseum Basel und Sammlung Ludwig', BSE III 129a, showing the mummification scene in the fourth register (photograph by Charlotte Hunkeler).

Tahai Shown with Osirian Attributes

There are further scenes, where Tahai's transfiguration can be observed. In two scenes within the second registers, Tahai is shown with Osirian attributes at either end of the compartment. In the centre, a falcon-headed deity is sitting on a throne. In front of him, the scene of the weighing of Tahai's heart is depicted. On the large scale, the heart is in balance with the Maat-feather and, thus, Tahai can enter the hereafter as a venerated person. Although there are variants where the deceased is shown in his / her dress of the living, the mummified form of the deceased, as in the depiction of Tahai, is more common. She is wearing red mummy-shrouds and her face is green, indicating the divine state she has reached through the veneration (Fig. 10).


Figure 10 (on the left). Detail of Tahai's cartonnage in the 'Antikenmuseum Basel und Sammlung Ludwig', BSE III 129a, showing the weighing of the heart in the second register (photograph by Charlotte Hunkeler).

Figure 11 (on the right). Detail of Tahai's cartonnage in the 'Antikenmuseum Basel und Sammlung Ludwig', BSE III 129a showing Tahai with Osirian characteristics (photograph by Charlotte Hunkeler).

In the same register, but this time behind the falcon-headed deity, two deities, the first of which is identified as Neith and the second as Heqa, there is another image of the deceased (Fig. 11). As at the other end of the scene, Tahai is wearing mummy shrouds and her face is green. Additionally, she is holding the Maat-feather of justice. Heqa, who is standing in front of her, is holding two snakes in his hands. The sun disc on top of his head is flanked by two Maat-feathers. Based on these attributes, he can clearly be identified as the personification of magic. In combination with Osiris, he is responsible for his resurrection and the victory over the enemies (Seeber 1976, 130). Depictions such as those on this cartonnage case additionally suggest that Heqa is not only responsible for Osiris, but also for the deceased who has achieved the Osirian state.

A Combination of the Everyday Dress and Osirian Attributes

In the first register, Tahai is wearing an everyday dress, but, at the same time, is presented with Osirian attributes (Fig. 12). Osiris is enthroned in the middle of the compartment. Behind him and on the left side of the compartment are Isis and Nephtys, drawn in human shape, identifiable by their headdresses and the accompanying inscription. One hand of Isis is held up in adoration; in the other hand, she is holding the ankh-sign. Nephtys is holding cloths in red and blue in each hand. Behind Nephtys, there are another two deities. Their bodies are in human shape and mummified. Contrary to the depiction of Osiris, focus was laid on their elaborate wrappings instead of an additional bead-net. In front of Osiris and on top of a huge lotus flower, a shrine is standing with a vaulted lid and a crouching jackal on it. Inside the shrine, there are the four Sons of Horus. Behind the shrine, Thot leads the deceased to Osiris. He is holding a red band in his left hand, which is tied around Tahai's waist. Her skin is green, analogous to that of the gods. Additionally, Tahai is displayed in a sheath dress, typically worn by the goddesses (Hall 1986, 23–25), as can be seen with Isis and Nephtysin this and further scenes on Tahai's cartonnage case. These chad-band around her head indicates her forthcoming resurrection (van Walsem 1997, 110). Her arms are crossed in front of her breast in a similar style as Osiris'.

Figure 12. Detail of Tahai's cartonnage in the 'Antikenmuseum Basel und Sammlung Ludwig', BSE III 129a, showing Toth leading Tahai to Osiris (photograph by Charlotte Hunkeler).

Inscriptions Mentioning Tahai as Osiris

Among the various short inscriptions mainly mentioning the names of the depicted deities or the *ḥtp dj nswt* formula, there are two inscriptions mentioning the protection of a male individual. One of them is written between Isis and Osiris and reads: *jnk 3s.t jr s3=f*, which can be translated as 'I am Isis who protects him' (Fig. 13). The question of the person, who is being protected by Isis, arises. Although Osiris is depicted in front of Isis, such formulae are usually used for the deceased. If this assumption is correct in this case, the male pronoun would indicate a male owner.

Figure 13 (on the left). Inscription on Tahai's cartonnage in the 'Antikenmuseum Basel und Sammlung Ludwig', BSE III 129a, first register (photograph by Charlotte Hunkeler).

Figure 14 (on the right). Inscription on Tahai's cartonnage in the 'Antikenmuseum Basel und Sammlung Ludwig', BSE III 129a, first register (photograph by Charlotte Hunkeler).

To get a clearer picture, the second and similar offering formula of the same register will be described. In the inscription in front of Nephtys, the goddess herself is not mentioned but Hathor: *jnk Ḥt-ḥr n Wsjr jr s3=f n jr 3s.t,* meaning 'I am Hathor belonging to Osiris who protects him on behalf of Isis' (Fig. 14). In this instance it is clear that Osiris is meant with the male pronoun. However, it is not just Osiris, ruler of the underworld, but also Tahai, who has become an Osiris. Thus, this relatedness between Osiris and Tahai can be observed not only in the depicted scenes on the cartonnage case but also in the inscriptions.

To recapitulate, there are elements, which indicate that the cartonnage case was decorated for a male burial. A very prominent feature in support of this is the brown face. Furthermore, the lowest register with the scene of the tree-goddess presents the deceased in a very unusual dress that has more in common with a male skirt than with female clothes. In most of Tahai's depictions she is shown with divine characteristics, which do not allow a clear assignment to female or male individual.

It has been observed by several Egyptologists (e.g. Cooney 2008 and 2010) that male iconographical indications, as well as masculine pronouns, were used to indicate the transformative state of the deceased in order to enter the hereafter. For example, Cooney shows that the female deceased has to fulfil a temporary gender transformation and become an Osiris to reach the 'state of a masculine divinity to create new life after death' (2010, 236). Body envelopes of women dating from the New Kingdom and the Third Intermediate

Period thus show more male features than female ones. Cooney's observation could explain the male pronouns, the brown face and the depiction of Tahai as an Osiris. Nevertheless, *bꜣ*-birds were usually depicted in the gender of the deceased (Cooney 2010, 17) and the 'two-dimensional depiction of the deceased show the end result of the transformation" (Cooney 2010, 15). In Tahai's case, these typical female iconographical characteristics are also ambiguous and leave room for speculation.

Conclusion

The cartonnage case belonging to the 'Museum der Kulturen Basel' and currently on display in the 'Antikenmuseum Basel und Sammlung Ludwig' looks like a regular cartonnage case dating from the 22nd dynasty. However, the case itself, as well as the deceased inside, is guarding several secrets. When the cartonnage case was x-rayed in the seventies, it became obvious that the body of the female deceased is heavily mutilated. Questions regarding the moment and reasons for these damages arise. While trying to answer these questions, peculiarities of the decoration, iconography, and inscriptions become noticeable. Although the deceased is clearly recognisable in the depictions, the iconography is not precise concerning the sex of the owner of the cartonnage case.

At first glance, the cartonnage seems to be intact and it comes as a surprise to learn of the dreadful state of the mummy within. Regarding the deformation of the mummy, the dislocated hip and shoulder on the left side indicate a problem with pushing the mummy inside or pulling it out from its its supposed secure protection. The cut off hands, feet, and head rather imply problems with showing the mummy inside the case. However, the timing of the deformation remains uncertain, and it could have happened in antiquity or in modern times. Unfortunately, comparative studies have demonstrated that similar mutilations have happened in both periods.

In search of more information about the timing of the damaging pushing in of the mummy, the condition of the cartonnage case and the decoration scheme were studied. The former has shown that the frontal part is almost completely intact, which would be unusual for an unwrapping event. The backside, however, was restored in the lower area and features a horizontal cut in the middle of the cartonnage case. This cut could explain how it was possible to pull the mummy out of the cartonnage case without causing too much damage to the frontal decoration of the case, while also taking into account that the body of the deceased was deformed.

When looking at the decoration, the iconography of the deceased, and some selected inscriptions, it is noticeable that the sex of the deceased is ambiguous. While there are a few female elements, such as the sheath-dress, which was mainly used for goddesses, and the voluminous wig, there are more indications of a male owner of the cartonnage case. Although a brown painted face was not solely used for male cartonnages and coffins in the later part of the Third Intermediate Period (22nd to 25th dynasties), other elements, such as Tahai's iconography where she is depicted wearing a kilt instead of a female dress and the male *bꜣ*-bird, are more explicit. Most of the iconography and some of the inscriptions, however, show her as an Osiris and thus seem to stress the aim of the deceased, namely of reaching the afterlife. The earthly individual Tahai once was, seems to have become insignificant.

Hence, it is impossible to determine whether the cartonnage case was originally intended for a male owner, whether the artist only had templates for male iconographies, or whether the distinction between man and women was not considered important. The timing of the deformation of Tahai's body also remains unclear. Thus, whether Tahai has at some point reached the afterlife, she was so much hoping for and as is shown in various scenes on her cartonnage, will remain her secret.

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Three's a Crowd: the Possibility of Polygyny in New Kingdom Thebes

Ellen Jones

Introduction

Tomb iconography embodied the social and cultural ideals of the ancient Egyptian male elite within the scope of religious and artistic decorum (Meskell 2002, 10; Hartwig 2004, 3). As a result, funerary iconography can be a source for elite perceptions of issues such as gender roles, social hierarchies, and kinship relations (Lustig 1993; 1997; Robins 1994; Roth 1999; Maitland 2015). This paper is based on my Master's thesis (Jones 2016), which focused on the iconography and artefacts from four early 18th dynasty Theban tombs at Sheikh Abd el-Qurna to explore the possibilities of polygyny in New Kingdom Thebes (Fig. 1). These were: Theban tomb (TT) 82, which was owned by *Ỉmn-m-ḥ3t* (PM I.1^{2}, 163–7; Davies and Gardiner 1915); TT 84, which belonged to *Ỉ3mw-nḏḥ* (PM I.1^{2}, 167–70; *Urk*. IV, 937–62; Gardiner and Mond photographs, Griffith Institute Archive); TT 92, which was owned by *Sw-m-nỉwt* (PM I.1^{2}, 187–9; Bryan 1995; 2001); and TT 96, which belonged to *Sn-nfr* (PM I.1^{2}, 197–203; see below). These tombs were chosen as they each depict multiple wives of the tomb owner within a specific temporal period and geographical location.

Polygyny is well attested among the royal family in ancient Egypt, for example, Tuthmosis III (Hoch 2003), but it is unclear whether this practice extended to non-royal spheres (for studies on the Old Kingdom: Kanawati 1976; McCorquodale 2013; for the Middle Kingdom: Simpson 1974; for the New Kingdom: Robins 1993, 64–7). The evidence for elite polygyny is fragmentary, mostly ambiguous, and from a range of periods, increasing the risks posed by misinterpretation and our own preconceptions. For this reason anthropology and ethnography can be used in tandem with Egyptological enquiries to help model and explore the possibilities in the surviving ancient material corpus, meaning that my own interpretations do not form the sole basis of the conclusions drawn (for similar approaches: Lustig 1993; 1997). In this instance, anthropological and ethnographic case studies are useful tools for comparing between modern polygynous societies and the New Kingdom in order to assess the potentials for polygyny among the ancient Egyptian non-royal elite. Following this, TT 96 provides an opportunity to analyse how multiple wives were portrayed in a single tomb, comparing the portrayals of each wife to consider whether there are any differences or similarities between them, and from that explore what possible forms polygyny could have taken in New Kingdom Egypt.

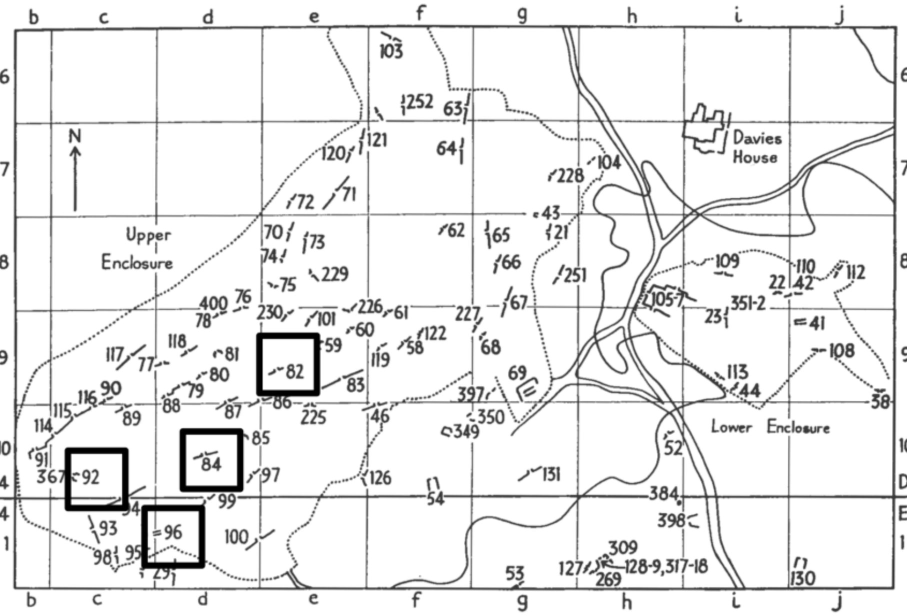

Figure 1. Map of Sheikh Abd el-Qurna cemetery showing TT 82, 84, 92, and 96 (adapted from PM I.1^{2}, Pl. 5).

Polygyny in New Kingdom Egypt?

Polygyny is a type of polygamy and is conventionally defined as the marriage of one man to multiple women simultaneously; however, this varies depending on what constitutes marriage in a particular society (Schultz and Lavenda 2004, 281, 283–5). Therefore, definitions of polygyny must be culturally and historically specific. As Delius and Glaser note, monogamy and polygamy are not 'catch-all solution[s]' (2004, 114); marital relationships often form a spectrum of 'pre-marital, extra-marital and inter-marital sexual relationships' (Hayase and Liaw 1997, 297).

Our understanding of ancient Egyptian marriage is incomplete. The limited evidence suggests that marriage in the Pharaonic period was not state-administrated and probably involved a level of co-habitation and social acknowledgement (Toivari-Viitala 2001, 84–90); formal marriage ceremonies are apparently not attested (Toivari-Viitala 2001, 49), and the majority of surviving legal marriage documents come from the Graeco-Roman Period (Pestman 1961). There appears to have been multiple terms for a 'wife', including *ḥmt* (TLA lemma no. 104730), *snt* (TLA lemma no. 136260), and *ḥbsw* (*ḥbsyt*) (TLA lemma no. 103900), and for a 'husband', such as *h3y* (TLA lemma no. 97390) and *sn* (TLA lemma no. 136230; for discussion of these terms: Robins 1979; Willems 1983; Toivari-Viitala 2001; Eyre 2007; Campagno 2009). While this variation and the lack of documented formal practices make defining ancient Egyptian marriage challenging, they imply that a range of marital relationships might have occurred in ancient Egypt, raising the possibility that this could have included polygyny.

In *Polygamy: a cross-cultural analysis*, Miriam Zeitzen notes five main functions: political, power, prestige, economic, and reproduction (2008). The marriage of one man to multiple women can ally families together, forming strong political units. At the start of the Middle Kingdom, Montuhotep II arguably used this strategy to create a loyal circle of elite families (Callender 1994, 15). Strategic marital alliances are also evident in the late 17th to early 18th dynasty Tomb 5 at El-Kab (PM V, 182), where two daughters of *Iʿḥ-ms* son of *Ib3-n3*, named *Km* and *S3t-Imn*, seem to have married the same man, a royal tutor called *It=i-rri* (Davies 2009, 147–51). It is unclear whether these marriages were simultaneous or successive; a double-marriage could have strengthened the union between these families, while it is also possible that one daughter married her brother-in-law following the death of her sister. Regardless, the marriage between two such elite families could no doubt have been advantageous to both sides (on the importance of royal tutors: Roehrig 1990).

Polygyny is connected with power differentials, both between genders and within gender categories. As a result, polygyny is often associated with gerontocracy, with older generations holding most of the social power, especially regarding who is allowed to marry whom (Zeitzen 2008, 50–3). Respect for and taking care of one's elders are well documented in ancient Egypt, so much so that an individual's inheritance usually depended on fulfilling these social expectations. For example, in the Ramesside Will of Naunahkte, the citizeness *Niwt-nḫt* states that only the children who had provided for her in her old age will receive a portion of her property (P. Ashmolean 1945.97, 2.6–7; Černý 1945); a practice that is supported by 'a law of pharaoh' quoted in the late 19th/early 20th dynasty P. Bulaq 10: 'Let the possessions be given to him who buries' (= P. Cairo 58092, recto 10–11; Janssen and Pestman 1968, 140; Pestman 1969, 71). Moreover, attaining a 'revered old age' is the ideal for the male elite, as exemplified in the classic Middle Kingdom poem *Teachings of Ptahhotep* (641–4; Parkinson 2002, 257–66; Janssen and Janssen 2007, 194–203).

Polygyny can often add prestige to individuals and family groups: according to the *Instruction of Ani*, a man with many children is admired, suggesting that having multiple wives and so potentially more children might have increased one's social standing (16.2–3; Quack 1994, 88–9). The letters from the Middle Kingdom *k3*-priest *Ḥk3-nḫt* list at least eighteen members of his household, suggesting the extent of ancient Egyptian families (MMA 22.3.517, 7–22; Allen 2002, Pl. 30). Reproduction was arguably linked with prestige in ancient Egypt, and having children, especially sons who could assume their father's office, seems to have been a key cultural motive for marriage throughout the Pharaonic period. The same sentiment appears in both the *Teaching of Hordedef* (I.4–5; Helck 1984, 4–5) and the *Instruction of Ani* (16.1–2; Quack 1994, 88–9): 'Take for yourself a loving wife, a male son is born to you'.

There are factors, such as divorce and health risks, that make New Kingdom Egypt a less likely setting for polygyny; however, these limitations need not rule the practice out completely. For example, even though divorce was available to both men and women in ancient Egypt, the Demotic *Instruction of Ankhsheshonqy* advises a man not to divorce his wife if she is infertile (14.16; Glanville 1955, 34–5), which could suggest that polygyny was a more favourable solution. This practice is arguably evident in the Adoption Papyrus, which is internally dated to the reign of Ramses XI and probably came from the Middle Egyptian town of Spermeru (Gardiner 1941, 23; Eyre 1992). In the first section of the document, a man, *Nb-nfr*, adopts his wife, *N3w-nfr*, as his heir since the couple were childless (recto 3–5). The section ends with a statement of this but the wife's name is given here as *Rn-nfr* (recto 11–12); it is unclear whether this refers to the same person, but the change in name does not seem to have affected the situation. In the second section, dated seventeen years later, the wife mentions three children which *Nb-nfr* appears to have had with a female servant named *Dwn=i-ḥwt-iry* (recto 15–17); *Rn-nfr* adopts these children as her own heirs (verso 1) and facilitates the marriage of the eldest child to her younger brother (recto 21–2), making the latter her heir as well (verso 8–9). *Nb-nfr* appears to be deceased at this point (verso 11). Thus *Nb-nfr* and *N3w-nfr*/*Rn-nfr* seem to have resolved their infertility, which would have jeopardised both their joint property (Janssen and Pestman 1968) and *N3w-nfr*/*Rn-nfr*'s position should she be widowed (Janssen and Janssen 2007, 203, 224–5), through an arrangement that appears to have involved polygyny.

From marriage settlements and inheritance documents such as the Will of Naunakhte, it seems that upon divorce, or in *Niwt-nḫt*'s case death of a spouse, the joint marital property was divided between the couple, with the husband receiving two-thirds and the wife a third; in addition the wife had a right to the personal property which she brought into the marriage (4.2–3, 4.9–12; Černý 1945; Janssen and Pestman 1968, 165; Toivari-Viitala 2001, 90–1; Eyre 2007, 230). As a result, divorce would have been economically disadvantageous for men and would have left women in a similarly vulnerable situation to widows (Janssen and Janssen 2007, 203, 224–5); being married was the socially expected state for both women and men in ancient Egypt (Eyre 2007, 223–5), making divorcees an arguably precarious cultural status. Conversely, these factors suggest that polygyny, and indeed serial monogamy, was probably only practised by those men who were wealthy enough to be able to afford a marriage settlement for each wife. Such settlements appear to have listed the joint property of a couple, which would become the inheritance of their children, and with each successive settlement a man would have been left with less resources for future settlements (Eyre 2007, 223, 231, 236).

Analysis of modern societies suggests that mental health is often negatively affected by polygyny, especially for the women and children involved (Daoud *et al.* 2014). In their study of modern Arab Bedouin societies, Alean Al-Krenawi and Vered Slonim-Nevo (2006), and later with Bar Yuval-Shani (2008), show that polygyny frequently led to jealously between wives and to a lack of resources with which to provide for the family's many children (2006, 325–6; 2008, 206). Such arrangements were only successful—albeit still emotionally challenging (2006, 325)—when each wife and her children were treated equally (2006, 326; 2008, 204). Regardless, the children of these families overwhelmingly planned to marry monogamously (2006, 323; 2008, 203). An increased number of sexual partners can also put individuals at a greater risk of sexually transmitted diseases and health complications (Zeitzen 2008, 176; Daoud *et al.* 2014, 385–6), but such factors are unattested in the ancient Egyptian sources, particularly as the few tombs which show multiple wives lack any associated human remains with which to investigate these possibilities.

Overall, therefore, the evidence of parallels suggests that New Kingdom Egypt was a social setting that could have accommodated polygyny in both its royal and non-royal spheres. Despite the option of divorce and the potential health risks involved, the strong social emphasis on having children combined with the political potentials for large family units suggests that a man with sufficient resources might have had reasons to practise polygyny.

Case Study: Theban Tomb 96

TT 96 was owned by *Sn-nfr*, the Mayor of Thebes; it is located in the northern cemetery of Sheikh Abd el-Qurna and dates to the reigns of Tuthmosis III and Amenhotep II (scenes 5 and 17; scene numbers follow PM I.1^2). It comprises a ground-level tomb chapel, and a subterranean burial and ante-chamber (Fig. 2). The former, known as TT 96A, is severely damaged and has been in that state since at least 1927–1928 when Norman de Garis Davies visited it (1928, 46). The analysis of this part is thus primarily based on notes by one of the Davies (possibly Norman), now in the Griffith Institute Archive, Oxford (MSS 11.3 and 11.4). In comparison, the subterranean area, named TT 96B, with its unique vineyard ceiling design is well preserved and currently open to the public with an entrance leading directly into the ante-chamber; it is extensively published (Urk. IV, 1417–38; Virey 1898; Helck 1958, 423–4, 525–6; Desroches Noblecourt *et al.* 1985; Hodel-Hoenes 2000, 112–39).

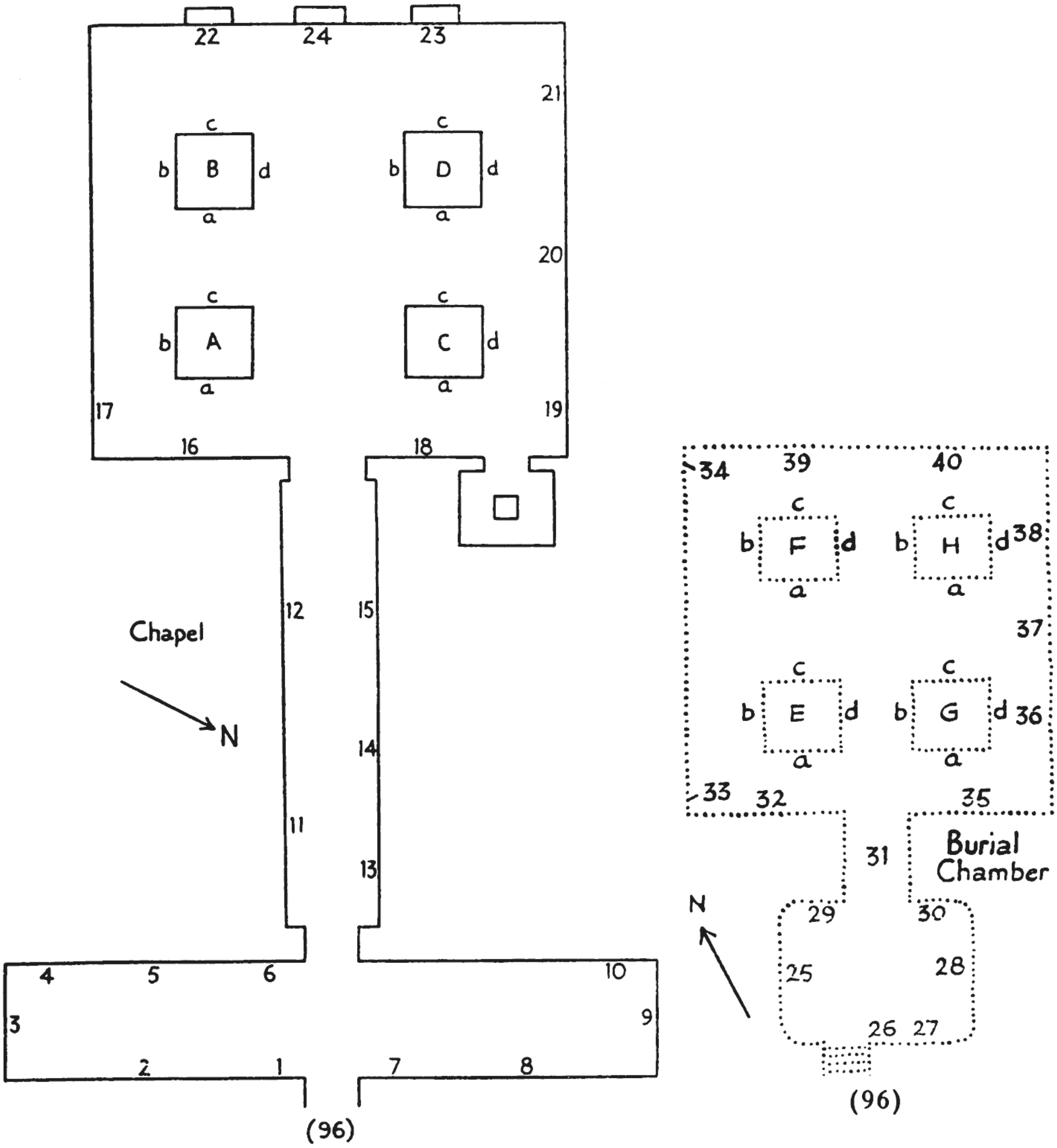

Figure 2. Plan of TT 96A (left) and 96B (right) (PM I.12, 196).

The iconography and texts suggest that *Sn-nfr* had three wives named, *Snt-nꜣy*, *Snt-nfrt*, and *Mryt* (Fig. 3). It is possible that the names *Snt-nꜣy* and *Snt-nfrt* referred to the same individual; however, as with the Adoption Papyrus, this is ambiguous and based on the iconographic trends noted below it is assumed that two different people are being depicted. In my Master's thesis, the analysis of the wives' portrayals incorporated a variety of aspects of their representation in order to try and get as holistic and representative a comparison as possible. Factors such as their captions, including their social titles, epithets, and kinship designations were noted, as well as their height, level, size, gesture, outfit, physical closeness to the tomb owner, and other people included in the scenes. The number of scenes including each wife was also quantified, in addition to the scene's type and placement within the tomb.

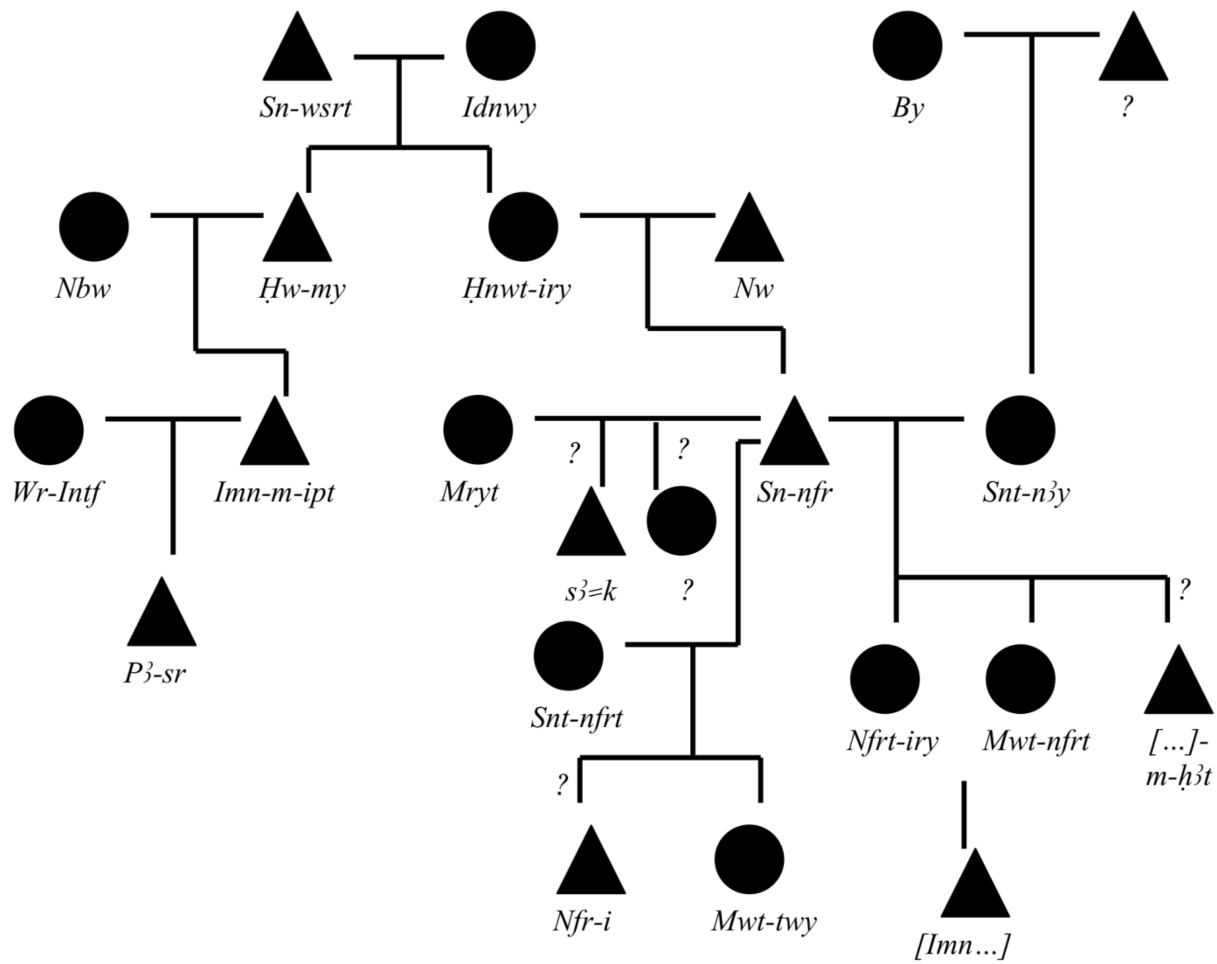

Figure 3. Suggested kinship diagram of *Sn-nfr*'s family.

The results can be summarised as follows (for further details: Jones 2016). In New Kingdom tombs there are two terms for 'wife': *ḥmt* and *snt* as of the reign of Tuthmosis III (Černý 1954, 28). In TT 96, *Snt-nꜣy* is designated with both terms and receives them the most consistently; even though *Snt-nfrt* is also called both terms, she lacks any designation in roughly a third of her captions—a trend shared by *Mryt*, who in addition is only ever called *snt*. While this could suggest that *Mryt* was *Sn-nfr*'s sister (Laboury 2007, 51), based on the trends noted here I believe she is more likely to have been his wife, following 'Western' definitions of these roles. Out of the wives, *Snt-nfrt* is called *nbt-pr* 'mistress of the house' (TLA lemma no. 82090; Ward 1986, 8; Toivari-Viitala 2001, 15–18) the most frequently.

Based on their social titles it appears that *Snt-nꜣy* had the highest status, acting as *mnʿt-nsw wrt* 'great royal nurse', with the word *wrt* 'great' marking her as a nurse of the future Pharaoh (TLA lemma no. 859987; Roehrig 1990, 320–1). This role was not simply ritualistic, but placed the incumbent within the inner circle of the royal family; images show royal nurses holding and often suckling royal children—a 'unique' representation of physical contact between non-royal and royal individuals (Roehrig 1990, 337).

This high status arguably led to *Snt-nꜣy*'s burial in Valley of the Kings Tomb 42 (Roehrig 1990, 161–2), which was discovered plundered by Howard Carter in 1900 (1901, 196). Her burial appears to have included an extensive mortuary assemblage ranging from a set of four canopic jars (including Cairo JE 36369 and Kestner Museum nos. 1935.200.253, 1935.100.1018) to a collection of over twenty vessels naming both *Snt-nꜣy* and/or *Sn-nfr* (Carter 1901, 196–7; Eaton-Krauss 1999, 122–7). *Snt-nfrt* also had a high social position as *mnʿt-nsw* 'royal nurse' (TLA lemma no. 859987), but since she consistently lacks the longer title it appears that she did not nurse the Pharaoh. In comparison, *Mryt* held the role of *šmʿyt nt Ỉmn* 'chantress of Amun' (TLA lemma no. 851078), which was arguably a slightly lower-ranking elite female title, even though it marked women 'from the families of the highest officials in Egypt' during this period (Onstine 2005, 37).

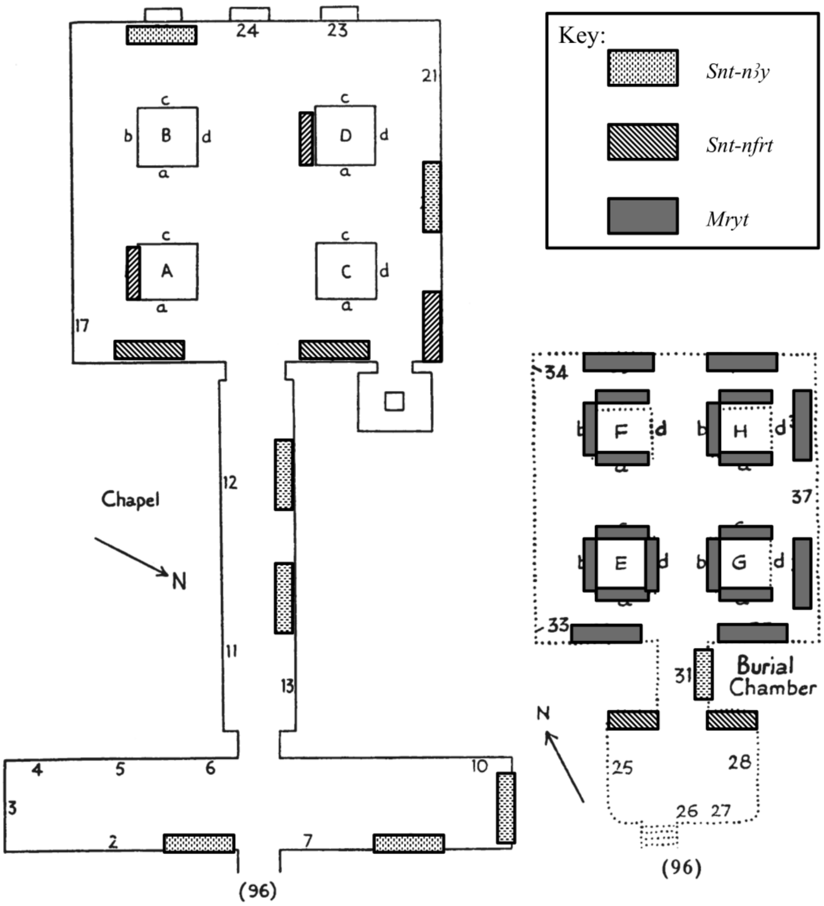

Figure 4. Plan of TT 96 showing scene distribution between the wives (adapted from PM I.1^2, 196).

Mryt's captions contain epithets, such as *mr<t>=f n*(*t*) *st-ib=f* 'his beloved, of his affection' (e.g. scene 38), more frequently than *Snt-nꜣy's* and *Snt-nfrt's*, and she also has the largest number of scenes within the tomb and the greatest variety in scene type. The placement of these scenes, however, meant that *Mryt* was completely invisible to ancient visitors to the tomb chapel as she was only depicted in the burial chamber, which would have been sealed after the funeral (Fig. 4; Hodel-Hoenes 2000, 7). In comparison, *Snt-nꜣy* was shown throughout the visible upper level—her appearance in the burial chamber is on re-used incised stone elements from the upper level (Kampp 1996, 360–2) and thus arguably not part of the burial chamber's original painted decoration. She is also the only wife to appear on the surviving artefacts belonging to *Sn-nfr* which were found outside of TT 96, including two statue groups: Cairo CG 42126 which was found in Karnak temple (PM II^2, 283–4; Legrain 1906, 76–8, Pl. 75; Eaton-Krauss 1999, 113–22), and British Museum EA 113 for which no provenance is recorded (PM I.2^2, 789; *Urk*. IV, 1437–8; British Museum 2017). *Snt-nfrt* is shown in both the back upper-level chamber and the subterranean ante-chamber, making her publicly visible but to a lesser extent.

In their depictions *Snt-nꜣy* and *Snt-nfrt* are often shown equal in height, size, and level to *Sn-nfr*, whereas *Mryt* is generally portrayed on a smaller scale. This is contrasted with the fact that *Mryt* often has the most elaborate outfit out of the three women, and is frequently shown in intimate poses with *Sn-nfr* and/or actively offering funerary objects to him (Fig. 5). It must, however, be taken into account that this offering motif is found exclusively on the pillars in this tomb and that the pillars in the upper level are severely damaged, meaning that this trend may not have been as restricted to *Mryt* as the surviving data might suggest. Nevertheless, the emphasis on *Mryt* and the frequency of this type of gesture are notable.

Figure 5. Common gesture-type of *Mryt* (Desroches Noblecourt et al. 1985, 54 [right, scene Gb], 58 [centre, scene Hc], 67 [left, scene Hb]).

Snt-nꜣy is presented as the wife who was the most integrated into *Sn-nfr*'s family; she is depicted in scenes with his parents, aunt and uncle, and cousin, as well as being depicted in the latter's tomb, TT 29 (PM I.1^{2}, 45–6). She is also shown with her own parents in TT 96 and appears to have had the most children with *Sn-nfr*: two daughters called *Mwt-nfrt* and *Nfrt-ỉry*, one of whom appears to have had a son named [*Ỉmn*-[...]] (Fig. 3). A man named [...]-*m-ḥꜣt* offers to *Sn-nfr* and *Snt-nꜣy* in scene 1; it is unclear what his relationship to the couple was, however, his caption is damaged meaning that if a kinship term was included it is now lost. In scenes 1 and 14 an unnamed boy is depicted with *Snt-nꜣy*, which suggests, albeit ambiguously, that she could have had a son. *Mwt-twy* was arguably a daughter of *Snt-nfrt* and *Sn-nfr* based on her inclusion in *Snt-nfrt*'s area of the tomb (scenes 25, 27, and 28), while the references to a son of this couple are uncertain.

Scene 16 shows a man offering to *Sn-nfr* and *Snt-nfrt*; he has the same title as *Sn-nfr* and so is perhaps his son, although there is no kinship term in the caption. Similarly, the references to a son and daughter of *Mryt* and *Sn-nfr* are highly doubtful without either the name of the child and/or any kinship term in the captions (scene 35, Ec, and Fb). The inclusion of such figures was probably due to a mixture of artistic, social, and religious conventions in tomb iconography (Hodel-Hoenes 2000, 23), rather than to portray an actual child, as can be argued for other cases where a couple appears to have been childless (as in TT 92).

Chief and Minor Wives

I suggest that the multiple wives in TT 96, and TT 82, 84, and 92, can be interpreted in terms of 'chief' and 'minor wives'. The broad descriptions 'chief' and 'minor' were chosen in order to focus on the potential hierarchies between wives, in contrast to the terms 'first' or 'second' which refer to their order of marriage.

The word 'chief' is based off royal titles such as *ḥmt-nsw wrt* 'great royal wife' (TLA lemma no. 854246), and 'minor' to complement this. The portrayals of each wife were compared across the four tombs to suggest broad representational trends of a 'chief' and 'minor wife'. 'Chief wives' are called *ḥmt* the most often and are also usually the only wife to be called *nbt-pr*; they commonly have the highest number of epithets, scenes, and scene types, as well as number of children with the tomb owner, making them the most integrated into his family. They generally have the highest social standing, most elaborate outfits, and are usually the only wife depicted physically touching the tomb owner or on an equal scale to him. 'Chief wives' are normally portrayed throughout the tomb and on the tomb owner's external objects, while 'minor wives' often lack the above traits and are generally restricted to a certain area of the tomb. In some cases 'minor wives' are only found on the tomb owner's external objects, such as *Mryt-Ỉmn* who is mentioned on *Ỉmn-m-*

ḥ3t's stelophorous statue, Berlin ÄM 2316, which was found in West Thebes (PM VIII.2, 566, no. 801-633-102; *Urk*. IV, 1049, 6–15; Eggebrecht 1987, 349).

TT 82, 84, and 92 each portray two wives who could be considered a 'chief wife' (*B3kt*[-*Ỉmn*], *Ḥnwt-nfrt*, and *Ḳ3t*) and a 'minor wife' (*Mryt-Ỉmn*, *Ḥ3*, and *Ỉwny*). While these tombs were ambiguous regarding whether the marriages were simultaneous or successive, the iconographic hierarchy between these wives corresponds to the organisation of marital property noted above. The fact that a man's first marriage settlement would have restricted the amount of property available for future settlements meant that a 'second wife' was probably economically inferior to the 'first wife' (Eyre 2007, 223, 236). This may be exemplified in P. Turin 2021, which is the 20th dynasty marriage settlement of *Ỉmn-k3w* (Černý and Peet 1927). In this case the joint property belonging to *Ỉmn-k3w* and his 'first wife' appears to have included around thirteen to fourteen servants, with *Ỉmn-k3w*'s two-thirds forming nine servants (3.2). In comparison the proposed settlement with his 'second wife', *Ỉnk-sw-nḏm*, seems to have only comprised four servants and their children (3.1). Moreover, this second settlement required the approval of *Ỉmn-k3w*'s children with his 'first wife' in order to ensure that it did not encroach on the property of the original marriage settlement, i.e. the inheritance of those children (3.5–8; Eyre 2007, 228). Literary texts such as the Ramesside *Tale of the Doomed Prince* (P. Harris 500 = P. British Museum EA 10060; Gardiner 1932, 1–9; Simpson 2003, 75–9) and the Ptolemaic *Tale of Setna I* (P. Cairo 30646; Goldbrunner 2006) suggest that this economic inferiority could have negative psychological consequences for 'second wives' (Eyre 2007, 223, 239). In the latter tale, the protagonist falls in love with a woman who persuades him to disinherit and kill his children by his 'first wife' in order to protect herself and her future children with him (5.1–30). This episode is presented almost like a dream as a result of *St-niw*'s theft of a magical roll (4.30–6) and so it could be argued to have been overdramatised perhaps as a punishment or an incentive to return the roll, which *St-niw* subsequently does (5.30–6.5). Nevertheless, this tale suggests that elite (male) literary perceptions of 'second wives' were largely negative (Eyre 2007, 243), perceptions which could have extended to the iconographic sphere based on the evidence from these tombs; the hierarchy between 'first' and 'second wives' could have paralleled that between 'chief' and 'minor wives'.

In comparison, TT 96 seems to show three wives, which is rare for early 18th dynasty Theban tombs, and it appears to depict two women who could be considered a 'chief wife'. *Snt-n3y* is arguably a 'chief wife' based on her social standing, her integration into *Sn-nfr*'s family, her equality to him in terms of scale, and the number of her external objects both with *Sn-nfr* and of her own. *Mryt* also appears to be a 'chief wife' due to her number of scenes, scene types, and epithets, her elaborate outfit, and frequent intimate gestures with *Sn-nfr*, and active poses in her scenes. Therefore, in these respects TT 96 seems distinctive. The number of wives and the unusual way in which they are shown not only make this family group a suitable case study for discussing possible forms of ancient Egyptian polygyny, but also make it necessary to look beyond a simple hierarchy between 'chief' and 'minor wives' to explore other potential intra-familial female relationships.

TT 96 shows an unusual spatial separation of wives (Fig. 4); because of this delineation, *Snt-n3y* would have been the most visible wife to ancient audiences. If the burial chamber of TT 96 had not been preserved, *Mryt* would have been completely invisible to modern scholars, as she probably would have been to any ancient visitors of TT 96. Parallels in modern Arabic Bedouin polygynous communities of the Negev, studied by A. Al-Krenawi (1999), could offer a possible explanation for this. These communities are patriarchal and gerontocratic (1999, 420), and so despite the geographical and temporal distances with ancient Egypt some similarities are present. In these Bedouin societies, a man's first marriage was organised by his family to preserve tribal honour, whereas he was free to choose his 'second wife'. As such, the 'first wife' was arguably a more socially significant wife but was often not as personally favoured by her husband as the 'second wife' (1999, 418). This could explain why *Snt-n3y* was displayed in more accessible areas of the tomb complex; as a 'great royal nurse' she would have provided *Sn-nfr* with a direct link to the very centre of the royal court (Laboury 2007, 49), the importance of which is supported by the title *snt mnʿ n nb t3wy* 'foster sister of the Lord of the Two Lands' held by one of her daughters in TT 29 (*Urk*. IV, 1440, 4; TLA lemma no. 136530; Roehrig 1990, 165). Equally it could clarify why *Mryt* was only shown in the inaccessible burial chamber, yet was depicted in ways that appear to be far more intimate with *Sn-nfr*, at least from a 'Western' perspective. The relative significance of the tomb chapel versus the burial chamber is ambiguous, but might clarify whether *Mryt*'s confinement to the latter and *Snt-n3y*'s restriction to the former was intended to be negative or positive. The tomb was an arena for self-presentation and a means of preserving an individual's identity in the wider community's collective memory (Vischak 2015, 208). This suggests that *Mryt*'s exclusion from the visible spheres of the tomb would be negative, implying that she was not important enough to be shown with *Sn-nfr* as his wife compared to *Snt-nꜣy*. However, a tomb also functioned as the final resting place for an individual's body (Hodel-Hoenes 2000, 2), meaning that *Mryt*'s prominence in the burial chamber's decoration was very positive. These two roles of an ancient Egyptian tomb were not mutually exclusive (Hartwig 2004, 1, 121), suggesting that self-presentation in funerary spheres could encompass both 'a reflexive internal aspect and an element of public display', as Margaret Maitland notes for individual personal identity (2015, 50). Thus neither space within the tomb appears to be uniquely important, but instead their symbiotic relationship arguably reiterates the balance between accessible/visible and inaccessible/invisible spaces noted above.

On this reading, *Snt-nfrt*, who is also depicted in the upper level of TT 96, was a visible 'minor wife'. One possible cause for *Snt-nfrt*'s under-representation compared to the other wives might have been a relatively short marriage to *Sn-nfr*, which was not unlikely considering the higher mortality risks for ancient Egyptian women (Robins 1993, 61, 64). This could have made her a less established member of his family, especially compared to his other presumably longer-standing wives. The slight difference in individual social status between *Snt-nꜣy* and *Snt-nfrt* may have also contributed to this hierarchy within the upper level of the tomb. The similarities in names between *Snt-nꜣy* and *Snt-nfrt* may even suggest that they were related, perhaps making them reminiscent of the two daughters of *Ỉꜥḥ-ms*, son of *Ỉbꜣ-nꜣ*, who married the same man. In this case, their original status within their family group might also have had an impact. For example, the title *sꜣ/t smsw* 'eldest son/daughter' (TLA lemma nos. 125510/125630 and 135720) appears to have denoted the primary heir of a couple; in iconography the incumbent is generally shown on a much larger scale compared to their brothers and sisters, and with more elaborate or higher social titles (Allam 2010; McCorquodale 2012). Thus, if *Snt-nꜣy* had been the 'eldest daughter' or held a similar position in her original family group, this could have made her a more prominently displayed wife of *Sn-nfr* than her sister *Snt-nfrt*.

Other explanations are possible for this pattern in representation, such as locality. It is unclear whether an ancient Egyptian polygynous family group would have housed each wife together or in different buildings; although parallel scenes between different wives imply the latter, such as those in the tomb of *Nb-Ỉmn*, TT 90 (Fig. 6; PM I.1^2, 183–5), or on the stela of *Ỉꜣmw-nḏḥ*, owner of TT 84 (Marseille stela no. 34; Maspero 1889, 22–3; 1890, 120–1). Separate households were also one of the main similarities between successful polygynous family groups in A. Al-Krenawi and V. Slonim-Nevo's study on Bedouin societies (2006, 325; Daoud *et al.* 2014, 392). It is possible that such households in ancient Egypt were in different parts of the country, which could explain any prominence of one wife, presumably the local one, over her counterpart(s). This is plausible for polygyny in general, but it does not seem to fit with TT 96 as all of *Sn-nfr*'s wives have roles connected either with the royal court or Karnak temple, both of which are associated with or, in the case of the latter, located in Thebes.

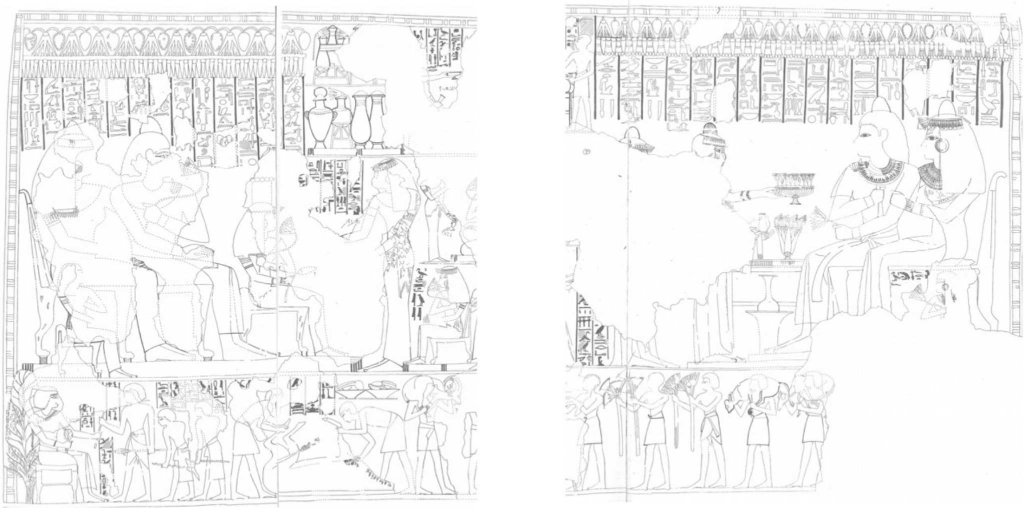

Figure 6. Parallel scenes from TT 90 (Davies 1923, Pl. 21 [left, scene 6] and Pl. 23 [right, scene 2]).

While an inscription from the Ramesside tomb of *Ky-nbw*, TT 113 (PM I.1^2, 230–1), allows us to conclude that the decoration of small tombs could be completed in a matter of months (Amer 1981, 9), evidence from TT 96 suggests that this tomb was decorated over a much longer period of time. For example, the floor was significantly lowered at some point and some scenes were altered once already painted (Laboury, in conversation, 2017). Based on this, it appears that the front room was decorated first, with the knowledge that a pillared second room would be built in the future since the first rooms do not contain any properly ritual scenes; the burial chamber was certainly painted last (Laboury, in conversation, 2017). This could suggest that the spatial separation of wives pointed to successive marriages, with each section being decorated to accommodate each new wife at different stages in *Sn-nfr*'s life; however, elements of this tomb's decoration were clearly planned before their execution, meaning that the representational layout could just as easily point to the intentional separation of polygamous wives, which as noted above was likely to have happened in reality. Similarly, while a statue made by *Sn-nfr* for *Snt-nꜣy* implies that she died before him (Musée de Design et d'Arts Appliqués Contemporains, Sammlung Jacques-Edouard Berger, no. 171; Hannig *et al.* 2016), it does not definitively prove either polygamy or serial monogamy. It does raise the point that *Snt-nꜣy* was buried in Valley of the Kings Tomb 42, and not actually in TT 96, perhaps making it more appropriate or necessary to depict another individual as 'chief wife' in the burial chamber. It is unknown where *Sn-nfr*, *Mryt*, and *Snt-nfrt* were buried as no human remains or evidence pointing to contemporary burials, such as coffin fragments, have been recorded in the literature on TT 96. H. Carter argued that *Sn-nfr* had been buried with *Snt-nꜣy* in the Valley of the Kings after finding the bearded heads of a set of canopic jars among the artefacts left in Tomb 42 (1901, 197–8). However, objects belonging to a wife of Tuthmosis III were found in this tomb as well as to a woman named *Bkt-rꜥ* who held the title of *ẖkrt-nsw* 'royal ornament' (TLA lemma no. 124780), which appears to have denoted a member of the royal court (Ward 1986, 14). This suggests that Tuthmosis III's wife was the tomb's original intended owner, but the tomb was unfinished and was used instead for the burials of *Bkt-rꜥ* and *Snt-nꜣy* (Roehrig 1990, 157, 160–1; Reeves and Wilkinson 2008, 102–3). It is more likely that *Sn-nfr*, *Mryt*, and *Snt-nfrt* were all buried in TT 96 and their remains subsequently lost in antiquity.

Thus while the social stories behind the iconography in TT 96 are ultimately irrecoverable, the representational equality between the portrayals of *Mryt* and *Snt-nꜣy* as 'chief wives' makes this family's idealised portrayal a variation of the hierarchy between wives evident in textual and other iconographic sources. The flexible and adaptive nature of kinship structures found here is not unusual; for example, informal or temporary polygynous arrangements such as those hinted at by the Adoption Papyrus can occur in many societies, including those that present themselves as exclusively monogamous (Zeitzen 2008, 17–20). The complex social pictures that emerge from these tombs highlight the need to view ancient Egyptian marital relationships on a spectrum rather than a strict dichotomy, acknowledging the varied possibilities that seem to be detectable in the archaeological record. The majority of potential explanations discussed above apply equally to polygynous and monogamous households, meaning that *Sn-nfr*'s status as a polygamist remains debatable. Nonetheless, in all of the tombs discussed here conceptual hierarchies are clearly shown between the tomb owner's wives, articulating the possible social relationships between women in the same family group and emphasising the need for a broader perspective on gender in ancient Egyptian society that includes its relationship with factors such as age, power, and status.

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‘They were like lions roaring upon the mountain-crests’: Soundscapes of war in New Kingdom Egypt

Uroš Matić

Introduction

Music, musical instruments and musicians are well studied in Egyptology (Manniche 1975, 1991; von Lieven 2004, 2006; Emerit 2013) and Egyptologists recently also started to focus on sound and soundscapes (Manassa 2008, 2011) and the concept of sound in ancient Egyptian religion (von Lieven 2016).

It had already been noticed that in the representations of musicians such as trumpeters and drummers, the military setting quantitatively dominates (von Lieven 2004, 101). Nevertheless, no studies have been conducted on the soundscapes of war and its aftermath. In the meanwhile several studies appeared dealing with music and military in other cultures such as the Maya (Sanchez 2007, 37–8) or the Ottoman and Austrian military (Pirker 1990), and anthropologists conducted studies of the role of music in conflict situations (Grant *et al.* 2010). As already noticed by A. von Lieven and C. Manassa textual sources are a mostly untouched field in studies of ancient Egyptian music and offer great potential (von Lieven 2004, 102–3; Manassa 2011, 148).

In this paper I will explore the representations of ‘military’ musicians and battle sounds in textual and visual media and the rhetorical use of sound in representations of war. I will analyse both textual and visual attestations from private and royal contexts and poor archaeological record of musical instruments.

The first part of the paper introduces the concept of archaeoacoustics and outlines its potential for Egyptology. After this follows an overview of the instruments attested in military contexts in the New Kingdom, namely trumpets, drums and clappers. Textual sources were studied in order to understand better the New Kingdom Egyptian conceptualisation of soundscapes of war. The paper closes with the use of music in military parades and various celebrations and festivals in which both the military and the sound of music played an important role in keeping discipline and establishing order.

Egyptology and Archaeoacoustics

Cartoonist S. Appleby in one of his caricature drawings explains ‘Air Archaeology’. The drawing shows an archaeologist listening to tiny vibrations still left from sounds which occurred in the past. He uses an echo catcher and stores the sounds in sound museum. Among them are the buzzing of a prehistoric fly, a Roman orgy, a lecture given by Galileo and a belch attributed to Wagner. His drawing is an indication of the public distrust of the possibility of retrieving past sensorial phenomena (Hamilakis 2013, 5, Fig. 1).

The problem, however, lies not only in the possibility of archaeologists to retrieve sounds of the past, but in their interpretation. Among the objects from Tutankhamun’s tomb were two trumpets, one silver and one bronze (Manniche 1976, 7–13). Their sound has only been recreated on a few occasions. In 1939 the Egyptian Antiquities Service was persuaded to take part in a BBC broadcast to the world from the Cairo Museum. R. Keating, a radio pioneer who helped convince the museum, was chosen to present the sounding of the trumpet to estimated 150 million listeners worldwide. The musician chosen for the broadcast was bandsman J. Tappern ([online]<http://www.bbc.com/news/world-middle-east-13092827, accessed on 09.07.2017>).

This sounding of the trumpet from the tomb of Tutankhamun is not to be confused with experimental archaeology which aims to answer specific previously determined research questions using experimental replication of certain actions and comparing the results of the experiment with the archaeological record.

Clearly, neither a research question nor a replica were involved in sounding of the Tutankhamun’s trumpet. To know how a trumpet sounds does not mean knowing how this sound could have been understood by those who could have heard it. Archaeologists study this problem under the term archaeoacustic and rarely under the term soundscape, coined during the 1960s and 1970s by the Canadian composer R. M.

Schafer as an auditory analogue of the term landscape (Cross and Watson 2006, 110; Blake and Cross 2015, 84).

Under 'sound studies', one understands the interdisciplinary field of soundscape research which encompasses artistic, compositional, cultural, communicational, ethnographic, historical and anthropological aspects (Hannoschök 2009, 38). The studies of sound in archaeology are known under the term archaeoacoustics which is the use of acoustical study as a methodological approach. It involves the study of the acoustics of archaeological sites, or the study of the acoustics of archaeological artifacts (Cross and Watson 2006; Blake and Cross 2015) often using experimental archaeology (Both 2009, 7–8; Pomberger *et al.* 2013-2014).

The archaeology of sound and music asks the questions: what did it sound like in the past?; how can this be determined?; what can archaeology contribute to understanding of music? (Schofield 2014, 289). Significant contributions to this field were made primarily by prehistoric archaeologists (Pomberger *et al.* 2013-2014) because the societies they study were focused on the oral and therefore the aural rather than the written. The role and effect of sound and the human experience of sound in environments is, however, severely under-researched in archaeology (Cross and Watson 2006, 107; Blake and Cross 2015, 81).

Whereas archaeologists dealing with archaeoacoustics discuss methodology for elucidating acoustics of ancient buildings and spaces (Cross and Watson 2006; Scarre 2006) or the utility of 'standard' measures of sound (Cross and Watson 2006, 108–11), Egyptologists have mainly studied musical instruments and musicians (Manniche 1975, 1991; von Lieven 2004, 2006; Emerit 2013), with more soundscape oriented studies being rare (Manassa 2008, 2011; von Lieven 2016). It is very likely that the inhabitants of the pre-modern world encountered everyday soundscapes that were very different from those of the modern urban world. Unlike prehistoric archaeologists, Egyptologists have rich textual and iconographic evidence to help them to identify places and structures where sound and sound properties were of special significance (Scarre 2006, 2). This means that there is much potential for studies of archaeoacoustics in ancient Egyptian contexts.

In studying the New Kingdom musical instruments found in military contexts in visual sources, Egyptologists mostly concentrated on the instruments themselves and not the context in which they were used. The characterisation of the overall context of the use of instruments such as trumpets and drums is usually simply described as military (Manniche 1975, 9, 35; Emerit 2013, 4–5) with little nuance. In the following passages of this paper I will discuss the context of these instruments and the musicians who played them in a military setting in more detail. Some of the evidence was already collected by H. Hickmann (1946) and L. Manniche (1975) and this I will discuss again, however I will also introduce some other evidence into the discussion.

Trumpets

A trumpet is a blown musical instrument. In ancient Egypt it was known under the name *šnb* (Wb 4, 514.6-7). The Egyptian trumpet was straight and short, and produced only the harmonic series of a note (Emerit 2013, 4). Nevertheless, trumpets can on some occasions be played with full power and in others they can be sounded (Gleason 2009, 35). This is especially important for the role of trumpets in producing various acoustics signals as it will be shown further in the paper.

The earliest known representation of the trumpet in the New Kingdom is found on the south side of the lower colonnade in temple of Deir el-Bahari of Hatshepsut. Here we find a register with two groups of soldiers marching towards each other. The left group consists of soldiers equipped with bows, throwing sticks and axes. They carry the standard with Hatshepsut's name Maatkare in a cartouche and are led by a trumpeter who is playing his instrument. The text above them states: *nhm jn ḏ3m n.w šmˁ mḥ.w ḥwn.w n.w W3s.t nfr.w n.w ḫnt.j* 'Rejoicing of the youths of Upper and Lower Egypt, youths of Thebes and recruits of the south'. The right group consists of soldiers carrying axes and branches. Among them is a drummer with a barrel shaped drum (Nelson 1908, Pl. CLV). Although *ḏ3m* can be either a military or a civil group (Stefanović 2007, 229), the context indicates that we are dealing here with a military contingent. The context is clearly a festival which included a military parade followed by musicians. The function of this parade was probably to show the military forces to the land of Egypt and its people, but we can also consider the possibility that the function of these soldiers could also have been to maintain discipline. In this the musicians could have played a supporting role in providing a sonic order.

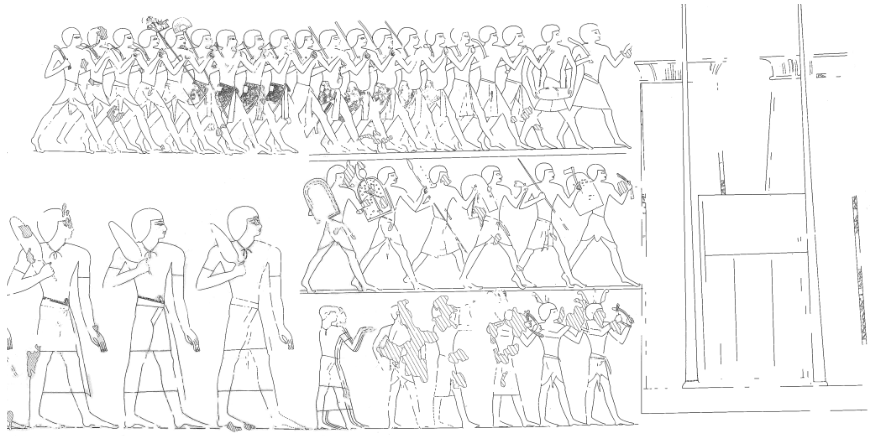

Figure 1. Tomb of Useramun (TT 131), Thutmose III, detail of a procession of military and musicians heading towards a temple (Dziobek 1994, Tf. 83).

In the tomb of Useramun (TT 131) from the reign of Thutmose III, on the north part of the east wall of the transverse hall, there is a representation of a procession heading towards a temple pylon (Fig. 1). The first and the second register from above depict soldiers whereas musicians are depicted in the third register. One drummer with a barrel shaped drum is depicted among the soldiers in the first register just behind the first figure of the troop. This indicates that he was in front leading the group. The first three figures in the third register are clappers with ostrich feathers in their hair, then comes a much damaged depiction of a trumpeter and a drummer with a barrel-shaped drum (Dziobek 1994, 77, Tf. 19, 83). This attestation shows that clappers, trumpets and drums were considered to be appropriate instruments for a military parade. This military parade and the musicians which accompanied it are depicted heading towards the temple which could again indicate the festive nature of the depicted event.

In the tomb of Tjanuni (TT 74) from the reign of Thutmose III to Thutmose IV, in a scene on the left inner wall of the transverse hall there is a representation of soldiers and their registration. In one of the registers is a representation of musicians. First from the right are two trumpeters, followed by five men carrying ostrich feathers in their hair and holding clappers and after them comes a drummer with a drum on his back (Brack und Brack 1977, 40–3, Tf. 9. 33). The trumpets are coloured in yellow which could indicate that they were made of bronze or even gold (Brack und Brack 1977, 43). Here musicians were part of the process of army registration of new recruits.

Figure 2. Tomb of Nebamun (TT 90), Thutmose IV and Amenhotep III, detail of a procession of military and musicians (Davies and Davies 1932, Pl. XXVII).

In the tomb of Nebamun (TT 90) from the reign of Thutmose IV and Amenhotep III, there is a representation of a trumpeter in the upper most register of a scene depicting a procession of soldiers (Fig. 2). The trumpeter is depicted blowing a trumpet on the left end of the register surrounded by soldiers wearing shields. These men are oriented to the left. To the right of the trumpeter are the standard and fan bearers oriented towards the right. Lower registers of the same scene show archers and soldiers equipped with spears oriented towards right in the second and towards left in the third register. The fourth register depicts offerings bearers oriented towards right. The four registers are enclosed on the right by the representation of the king bringing prisoners of war as spoils, represented in two registers and receiving tribute in the third register (Davies and Davies 1923, Pl. XXVII, XXVIII). The scene indicates the use of trumpets in the context of a military parade and the bringing of prisoners of war.

In the tomb of Ahmose from Amarna there is a representation of a trumpeter oriented towards right blowing into a trumpet and occupying a single register in between four registers of soldiers oriented towards the trumpeter on the left. They are part of the scene which depicts a royal visit to the temple. The soldiers with a trumpeter are depicted preceding the royal chariot (Davies 1905, 27–28, Pl. XXXI). Among the soldiers are Asiatics, Nubians and Libyans (Darnell and Manassa 2007, 193). As in some of the above presented examples we can again observe the complementary appearance of the military and musicians in festive context.

On a talatat block (Nr. 47) from the Memorial temple built for Tutankhamun by Ay, there is a representation of the king dragging Nubian captives. Behind them are two registers and in the lower one a trumpeter is depicted on the right blowing his trumpet and soldiers are depicted on the left (Johnson 1992, 168). The scene indicates the use of trumpets in the context of a military parade, in this case the successful return of the king from battle. The historicity of the battle scenes from this temple is another question.
In the Speos of Horemhab, a trumpeter is depicted in the scene of bringing of Nubian prisoners of war as the spoils of war from Kush as stated in the accompanying text (Thiem 2000, 142, 321, Tf. 58).

Figure 3. Trumpeter before a contingent of Shardana and other foreign soldiers in a parade of Ramesses III, south wall of the first court of Medinet Habu temple (Nelson 1932, Pl. 62).

On the south wall of the first court of Medinet Habu temple, a trumpeter is depicted before a contingent of Shardana and other foreign soldiers (Fig. 3) in a parade of Ramesses III (Nelson 1932, Pl. 62).

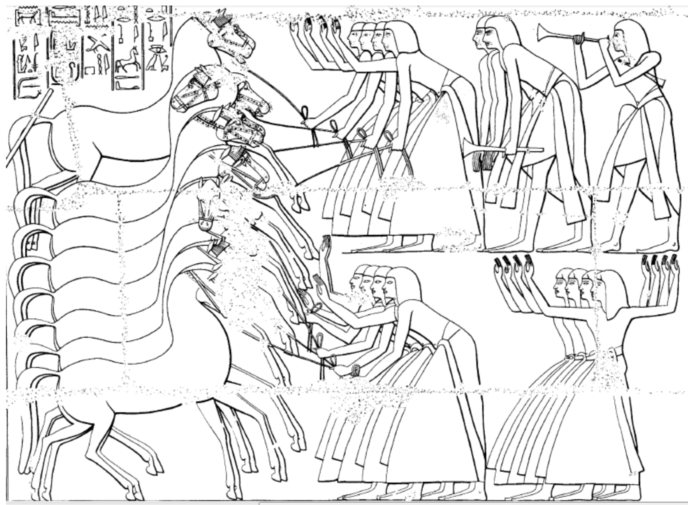

Figure 4. Two trumpeters in the scene depicting Ramesses III inspecting royal stables on the south wall of the first court of Medinet Habu temple (Nelson 1932, Pl. 109).

In the same temple, on the south wall of the first court, two trumpeters are found in the scene depicting Ramesses III inspecting royal stables (Fig. 4). The trumpeter on the far right is blowing the trumpet and the one on his left and in front of him has his trumpet lowered down (Nelson 1932, Pl. 109).

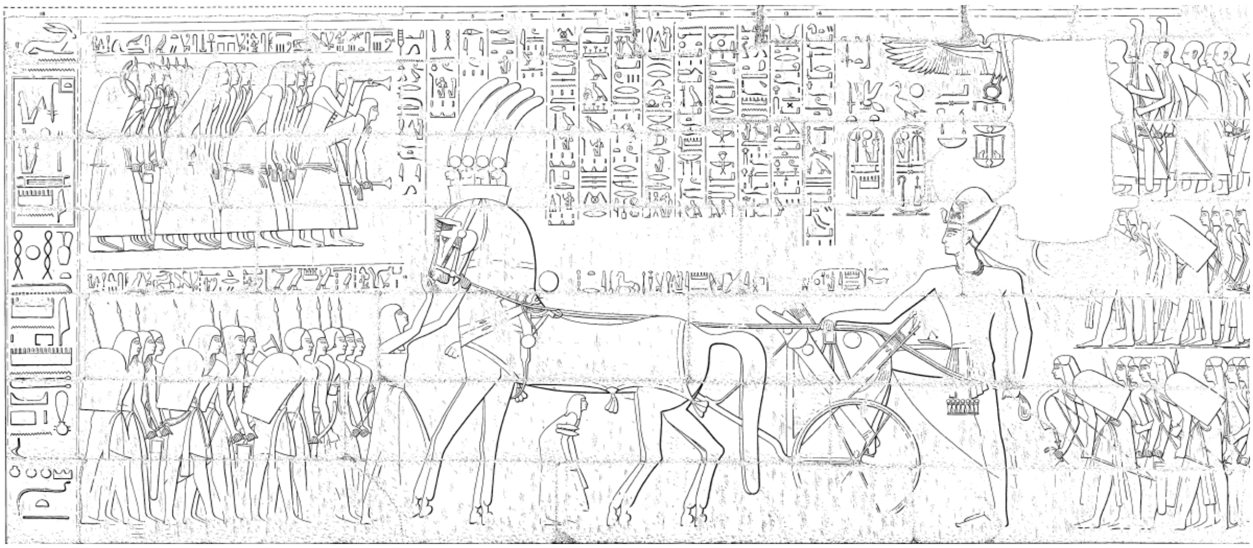

Figure 5. Ramesses III mounting his chariot for the campaign against the Lybians, Medinet Habu temple (Nelson 1930, Pl. 16).

We find two trumpeters followed by soldiers in a scene depicting Ramesses III mounting his chariot (Fig. 5) for the campaign against the Libyans (Nelson 1930, Pl. 16). In the scene in which the king is depicted issuing equipment to his troops for the campaign against the Sea Peoples, there are two trumpeters in the upper left corner of the scene. The one on the left is playing the trumpet and the one to his right and in front of him is bent down and his trumpet is lowered down (Nelson 1930, Pl. 29). These attestations indicate that trumpeters were part of the ceremonies before the commencement of war. They most probably announced the king in actions such as inspecting the royal stables and armoury and issuing of equipment. The sounds of trumpet most probably enhanced the solemnity of these actions. The same can be argued in the case of the king's climbing into his chariot and embarking on a military campaign.

There are two attested trumpeters (*ḏd m šnb* 'trumpet speaker') from the reign of Ramesses II. Both of them, Hesyu (?) and Tjen<er?>amun are known from their stelae from Qantir (Stela Hildesheim 397 and 428) (Exell 2006, 486, 502). The stelae do not provide us with much information on their musical careers. Since they probably lived in the residence indicates that they could have taken part in some of the parades depicted in private tombs and on royal temples. According to S. Emerit the title *ḏd m šnb* 'trumpet speaker' indicates that the trumpets were used in passing on orders (2013, 4–5). Two trumpeters, Peripatjauemope and Amnenkhau are attested in Papyrus Abbott, Papyrus Mayer A, and Papyrus British Museum 10054 dealing with the juridical process over tomb robberies in the reign of Ramesses XI (Spiegelberg 1917, 91–2; von Lieven 2006, 356–7). As A. von Lieven pointed out, it is interesting that these trumpeters are found in a milieu of lower middle class associated with Theban temples (von Lieven 2006, 357). Therefore, although we have evidence for the presence of musicians in the military we do not have evidence of specifically military musicians.

The above listed attestations indicate that the trumpeters were Egyptians. A. von Lieven pointed out to the problem of the ownership of trumpets considering that the only ones from New Kingdom Egypt are known from the tomb of Tutankhamun and a later one was found in a temple in Musawwarat es Sufra dating to the Merotic period. She asks if a trumpeter was maybe issued with an instrument in certain occasions (von Lieven 2004, 100). Although this is indeed an interesting question, one has to add that the number of survived instruments is too small to draw any conclusion. Based on the representations and the trumpets found in the tomb of Tutankhamun it can be assumed that they were made of precious metals such as gold and silver.

Drums

The drum is a member of the percussion group of musical instruments. It is classified as a membranophone (Manniche 1975, 1; Duchesne-Guillemin 1981, 290). Drums consist of at least one membrane, called a drumhead or drum skin, which is stretched over a shell and struck, either directly with the player's hands, or with a drum stick, to produce sound. The use of sticks to produce sounds on drums is not attested in New Kingdom and the sound was produced with the player's hands (Emerit 2013, 5). In ancient Egypt a barrel shaped drum was known under the name *kmkm* (Manniche 1975, 6) or *sḫ*ꜥ (Meeks 1980, 339). The peculiar name of the instrument *kmkm* may be related to the repetitive sounds made by its players.

A drummer from the temple of Deir el-Bahari was already mentioned above in the context of a festival which included military parade, and so was the depiction of a drummer in the tomb of Useramun (Fig. 1).
In Thutmose III's Armant temple there is a depiction of two drum players in a procession scene. Both of them are Nubians who carry their drums suspended on belts which go behind their necks and thus allowing them to move freely without dropping the instruments. Both drums are two sided. The drummers are surrounded by Nubian dancers (Mond and Myers 1940, Pl. IX; Emerit 2013, Fig. 10).

A drummer depicted in the tomb of Tjanuni (TT 74) from the reign of Thutmose IV was already mentioned above. Although depicted with a slightly different skin colour then the rest of the musicians he is still wearing the same Egyptian clothes as them (Brack und Brack 1977, 43). There is no reason to interpret these musicians as Nubians based on skin colour as already pointed out by H. Junker (1921, 128; contra Brack und Brack 1977, 43).

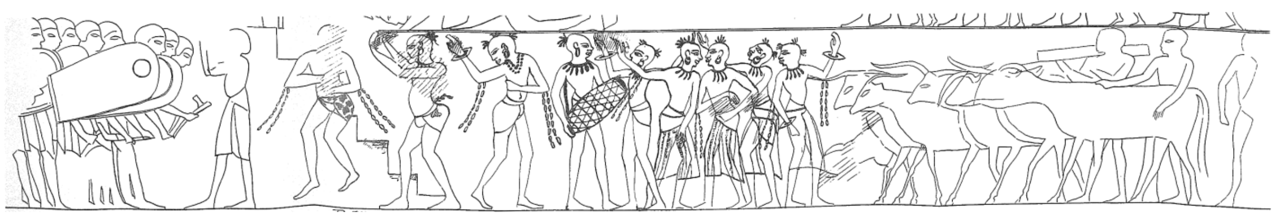

Figure 6. Tomb of Horemhab (TT 78), detail of a foreigner's procession scene (Brack und Brack 1980, Tf. 87).

A drummer playing his drum is depicted in the tomb of Re'a (TT 201) from the reign of Thutmose IV and Amenhotep III (Redford and Redford 1994, Pl. XXIII). In a foreigner's procession scene from the tomb of Horemhab (TT 78) there is a representation of a Nubian drummer playing his drum and being surrounded by Nubian dancers (Fig. 6) just below the register depicting Nubians and their tribute (Brack und Brack 1980, Tf. 47).

The above listed attestations indicate that in most of the representations the drum is played by Nubians, which could indicate the origin of this instrument (Manniche 1975, 9). According to M. Duchesne-Guillemin, the fact that the drums played by Nubians in these scenes have hides held and tightened by means of strings or laces may point to their Nubian origin too, as this type of drum is common in Africa (1981, 290). The above listed attestations match the actual finds of barrel-shaped drums, one of the Middle Kingdom which was found in tomb 183 in Beni Hasan, and one of possibly 18th dynasty date. Both are currently in the Egyptian Museum in Cairo (Manniche 1975, 6–7). The fact that in most of the representations it is Nubians who play the drums could also indicate a preference for Nubian drummers because of their skills with the instrument. Considering the fact that in several above discussed examples the Nubian drummers are accompanied by Nubian dancers one could argue that this is because of the specific type of a dance to specific music originating from Kush (Wild 1959).

Clappers

A clapper is a basic form of percussion instrument. It consists of two long solid pieces that are clapped together producing sound. They are classified as idiophones (Duchesne-Guillemin 1981, 288). In ancient Egypt it was known as ꜥ*.wj* (Meeks 1982, 41). The dual is related to the fact that the clappers are played in pair. The choice of the word ꜥ 'Arm, Hand' (Wb 1, 156.1-157.10) is related to the shape of the clapper resembling a forearm.

Men with clappers are depicted in the shrine of Hathor at Deir el-Bahari from the reign of Hatshepsut. On the northern wall, an escort of soldiers followed by these percussionists is accompanying a representation of boats (Naville 1901, Pl. XCL). Men with clappers depicted in the tomb of Useramun (TT 131) from the reign of Thutmose III were already mentioned above (Fig. 1).

Sounds of War in New Kingdom

Although victory songs are attested since the 6th dynasty (Biography of Uni) and into the New Kingdom (Poetic stela of Thutmose III), only in the case of the Biography of Uni are we dealing with a song the soldiers could have sang upon their return from war. The Middle and New Kingdom victory songs were more related to royal festive acts (Gnirs und Loprieno 2009, 245–9).

We know little of the use of musical instruments and the role of musicians during war itself. A trumpeter is depicted in the representation of the Battle of Qadesh of Ramesses II on the north wall of the hall of the Abu Simbel temple. He is behind the soldiers in the register below the one in which king is depicted in his chariot (Wreszinski 1935, Tf. 169–78). A trumpeter is also found behind the soldiers in the register under the one depicting the king in his chariot in the Battle of Qadesh representation on the west wall and the west half of the north wall in Abydos (Wreszinski 1935, Tf. 16-25).

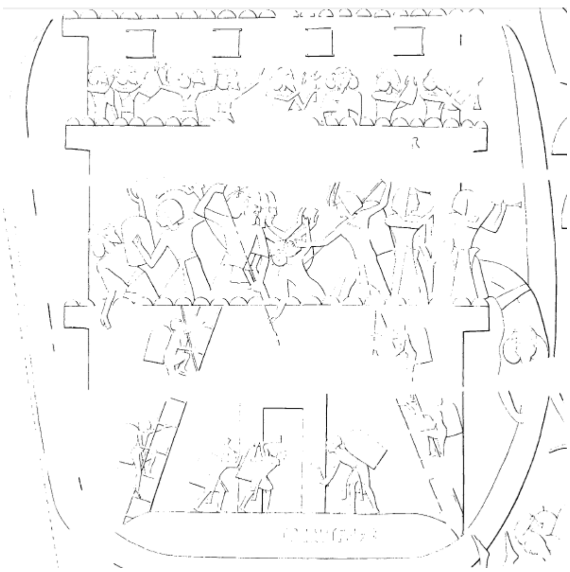

Figure 7. Egyptian trumpeter on the second level of the fort of town of Tunip, Ramesses III's siege of Tunip, exterior northern wall of Medinet Habu temple (Nelson 1932, Pl. 88).

An Egyptian trumpeter is depicted on the second level of the fort of town of Tunip (Fig. 7) in the representation of the siege of Tunip under Ramesses III on the exterior north wall of Medinet Habu (Nelson 1932, Pl. 88). According to the depiction, the fort is already taken by the Egyptian forces and the trumpeter is blowing towards right where the king is depicted in his chariot storming into the mass of enemies. He is most probably signaling victory or successful penetration into the fortress. Therefore, we can conclude that trumpets were used in the battle itself to signal the move of the army or the taking of an enemy fort.

Although, thanks to the BBC broadcast, we do know how a trumpet from the New Kingdom Egypt sounded like, and we can know how drums and clappers sounded like, that does not mean that the sounds produced by these instruments were perceived in the same manner by the ancient Egyptians as they are perceived by us.

The same sounds could have had different meanings. This is especially evident in ethnographic studies of sound which are helpful in exploring the possible range of interpretations of sound related activities in the past. Thus, the study of S. Feld conducted among the Kaluli of Papua New Guinea during the 1970s and 1980s showed that birdsong surrounding a Kaluli village was thought to be the voices of ancestors with myths attested concerning human-bird transformation. The Kaluli even modelled their songs upon birdsong and other environmental sounds. Environmental acoustics were integral to Kaluli musical performances (Blake and Cross 2015, 8–86). The information we have on the war-cries in ancient Egypt come from texts and the example of Kaluli, although coming from ethnography, serves to remind us that sounds can be interpreted differently in different cultures and different people and other beings within them. In the Egyptian context, H. te Velde and A. von Lieven discussed how for human ears, the screaming of the baboons might seem to be noise and to the solar god and the king this was thought to be an understandable language. According to some temple texts the king knows the secret language of baboons who rejoice when Re appears on the horizon (te Velde 1988, 129–34; von Lieven 2006, 29–30).

Textual sources from the New Kingdom inform us regarding the Egyptian perceptions of the sounds of war. Already in the text of the Second stela of Kamose from the 17th dynasty, we are informed about the consequences of hearing the Egyptian army's war-cry. The text states: *nn jwr ḥm.wt Ḥw.t-wꜥr.t nn sn jb=sn m-ẖnw ẖ.t=sn sḏm.t(w) hmhm.t n.t pꜣy=j mšꜥ* 'the women of Avaris will not conceive, for their hearts will not open in their bodies when the war-cry of my army will be heard' (Habachi 1972, 32–3).

Textual sources describing New Kingdom sounds of war are numerous and can be divided into those describing the war-cry of the king and those describing the war-cry of his army. The former are more numerous than the latter and will be discussed first. The descriptions of the war-cry of the king can be divided into five groups depending on the comparison drawn: supersonic, god-like, animal-like, frightening and weather (elemental)-like. These comparisons nicely illustrate what C. Manassa termed 'intertextuality of sound-a connection between objects and actions based on auditory parallels' (Manassa 2011, 164).

The war-cry of the king

Supersonic

The war-cry of the king reaches distant lands and peoples and all corners of the world and can therefore indeed be described as supersonic. His war-cry can reach specific distant lands, for example in the stela of Ahmose from Karnak where it is written: *hmhm.t=f m tꜣ(.w) Fnḫ(.w)* 'His war-cry is in the land of Fenchu' (Beylage 2002, 320-1). The Speech of Amun in the Poetic stela of Thutmose III states: *jy(j).n=j d(j)=j tjtj=k jm.j(w) jw(.w) ḥr.j(w) jn wꜣḏ wr ẖr hmhm.t=k* 'I came so that you can defeat the islanders because of your war-cry' (Beylage 2002, 336–7). In the Speech of Amun in the triumphal scene (west side) of Seti I at Karnak, the god says: *ḏj=j dbn.t hmhm.t=k ẖt* (...) 'I cause your war-cry to resound throughout (the Eastern sphere?)' (KRI I, 30. 10). In the Aswan stela of Ramesses II from year 2 it is written: *hmhm.t=f wsr n tꜣ stj* 'His war-cry is powerful in Nubia' (KRI II, 345. 5).

The war-cry of the king is so powerful that it reaches the Nine Bows. The Speech of Amun in the Poetic stela of Thutmose III states: *ḏ(j)=j hmhm.t ḥm=k ẖt psḏ.t pḏ(.w)t* 'I allow the war-cry of your majesty to bring down the Nine Bows' (Beylage 2002, 322–323). In the text on the Karnak temple describing the campaign against Yenoam and Lebanon, from his first regnal year, or later, it is written: *psḏ.t mks.w n hmhm.t=k* 'Nine bows bowing down at your war-cry' (KRI I, 15. 4). In the words spoken by the princes to the king: *hmhm=k dbn ḥr psḏ.t* 'Your war-cry resounds among the Nine Bows' (KRI V, 18. 2).

The king's war-cry is also so powerful that it reaches all foreign countries. In the Speech of Amun from the stela of Thutmose III from Karnak the god states: *wḏ.n=j hmhm.t ḥm=k r ḫꜣs(.w)t nb(.wt)* 'I commanded the war-cry of your majesty in all foreign countries' (Beylage 2002, 352–3). In the Speech of Amun to Seti I in the text of the undated campaign against the Libyans inscribed on the Karnak temple walls the god says: *ḏj=j hmhm.t ḥm=k ḥr ḫꜣs.t nb.t* 'I set the war-cry of your majesty upon every foreign land' (KRI I, 23. 16). In the Stela of Seti I from year 1 from the Temple of Ptah at Karnak the king's war-cry is described: *hmhm.t=f dbn=s ḫꜣs.wt* 'His war-cry, it reechoed around the foreign lands' (KRI I, 40. 15). In the text of the First Libyan war of Ramesses III at Medinet Habu as part of the rhetorical text before the king, it is written: *hmhm.t=f dbn ḫꜣs.wt* 'His war-cry encompassed the foreign countries' (KRI V, 13. 6).

The ecumenical character of the king's power is expressed in the statements such as the one in the campaign against the Sea Peoples on the north wall of the Medinet Habu temple of Ramesses III: *hmhm.t=f r šn.w jtn* 'Your war-cry extends to what the sun disc encircles' (KRI V, 27. 16). In the text describing the Second Libyan war in the first court of the same temple it is written: *hmhm.t=f nḫt=f dbn m tꜣ pn* 'His war-cry and his victory circulate in this land' (KRI V, 49. 7).

God-like

C. Manassa illustrated that sound can indicate divine presence (2011, 165). In the Karnak temple text of the undated campaign against the Hittites, Seti I is described in the following manner: *hmhm.t=f mj sꜣ Nw.t* 'His war-cry is like the son of Nut's' (KRI I, 18. 16). The same description is found in the formal triumphal scene on the second pylon in Karnak (KRI II, 168. 8). In the text of Ramesses II on fragments of pylon and propylon of the Aksha temple: *ꜥꜣ hmhm.t mj sꜣ Nw.t* 'Great of war-cry like the son of Nut' (KRI II, 212. 9). Within the Heliopolitan ennead Seth is regarded to be the son of Geb and Nut and he is simply referred to as the son of Nut (te Velde 1967, 27–8) especially in the Ramesside period (Kitchen 1964, 51). In the Papyrus Chester Beatty I, XVI.4, Re-Harakhte at the end states 'Give me Seth, the son of Nut, that he may dwell with me, being a son to me, and he shall thunder in the sky and be feared' (Lichtheim 1976, 222). This indicates that the war-cry of Seth, and therefore of the king, sounds like thunder and is something to be feared. This is also alluded to in the text describing the Second Libyan war of Ramesses III in the first court of Medinet Habu: *hmhm.t=f mj Bꜥl m ḥr.t* 'His war-cry is like Baal's in the sky' (KRI V, 58. 11). The storm god Baal was as an Asiatic version of Seth increasingly present in Egypt during the 19th dynasty (te Velde 1967, 126). In the text on the north wall of the Medinet Habu temple, there is a description of the lion hunt of Ramesses III in which it is written: *hmhm.t=f rn=f mj Stẖ* 'His war-cry and his name are like Seth's' (KRI V, 31. 12).

Animal-like

In the rhetorical text by the king in the text of the First Libyan war of Ramesses III at Medinet Habu (rear and north wall), it is written: *mj rw jd.w jp n ꜣ.t=f wdn ẖrw khꜣ sꜥꜣ ḏw.w n rn=f* 'Like a young lion, aware of his strength, of heavy voice, emitting a roar, at his very name the mountains are in travail' (KRI V, 16. 10-11). In the great inscription of year 5 describing the First Libyan War of Ramesses III: *ssm.wt=f mj bjk.w mꜣꜣ=sn pẖ.wt jw ḥrr mj rw sẖnn ḳnd* 'His horses are like falcons when they see the sparrows and they roar like a lion stirred up and angry' (KRI V, 22. 9–11). Here the horses of the king are described as roaring. This statement is interesting if one considers that the pairs of horses of the king depicted pulling the chariot of Ramesses II in the depiction of his Asiatic campaign, in the second scene from the south of the uppermost register on the outer west wall north of the entrance of the first court of the Luxor temple, are depicted wearing lion masks (Wreszinski 1935, Tf. 77). So not only were the horses described as roaring like lions but were also masked to look like lions as they 'roar'. According to C. Manassa the *hmhm* roar of a lion marks the triumph of solar rebirth in the Sixth Hour of the Book of Amduat, describing a lion with two udjat eyes who is pleased when Re rests upon his divine eye (Manassa 2011, 156–7).

In the text describing the Second Libyan war in the first court it is written: *ẖrw=f swhꜣ ḥr nḥd mj ꜥẖẖ* 'His voice breaks out and bellows like griffon's' (KRI V, 61. 4). In the Great Inscription of Year 5 of the First Libyan War of Ramesses III at Medinet Habu it is written: *hmhm.t=f mj ꜥẖẖ* 'His war-cry is heard like a griffon's' (KRI V, 24. 11-12). The designation *ꜥẖẖ* for the griffon is found only in the Ramesside period, in connection to kings Ramesses II and Ramesses III. It is used to express the power and strength of the king (Gerke 2014, 89–90).

Frightening

The war-cry of the king can cause fear among his enemies and place them under his control. The Speech of Amun in the Poetic stela of Thutmose III states: *sḏm=sn hmhm.t=k ꜥḳ(.w) m bꜣbꜣ(.w)* 'They heard your war-cry, after which they immediately hid in caves' (Beylage 2002, 334–5). In the Speech of Amun in the triumphal scene (east side) the god says: (...) *jwj=sn m hjms hw ḥr pꜣḏ.w jr.w n hmhm.t=k* 'I cause that they come humbly, fallen to their knees because of your war-cry' (KRI I, 27. 1). In the Poem of the Battle of Qadesh: *nb snḏ ꜥꜣ hmhm.t m ḥꜣ.tj nw tꜣ.w nb.w* 'Master through fear, great of war-cry, in the hearts of all lands' (KRI II 8, 7–11). The war-cry of Merenptah is described in the Nubian victory stelae from Amada, Amara West, Wadi es-Sebua and Aksha: *hmhm.t=f m jb=sn* 'His war-cry is in their hearts' (KRI IV, 35. 1). In line 5 of Papyrus Anastasi II (P. BM 10243) it is written about the king: *hmhm.t=f m jb=sn sndw=w n-ḥr=f* 'His war-cry is in their hearts so they fear from him' (Gardiner 1937, xiii–iv).

Weather (elemental)-like

In the Buhen stela of Akhenaten, it is written *hmhm=k mj hh nsr.t m-šꜣ ẖꜣs.t nb.t* 'Your war-cry is like the flame of fire behind every foreign land' (Smith 1976, 124). In the Ramesseum record of the battle against Dapur of Ramesses II, it is written: *sšn ḥr pw ẖꜣs.wt ꜥꜣ hmhm.t* 'He is a storm upon the foreign countries, loud of war-cry' (KRI II, 173. 13). This description of the king's war-cry further collaborates the above stated conclusion that his war-cry can sound like thunder.

War-cry of the army

In Ramesses III's great inscription of year 8 describing the Sea Peoples campaign on the second pylon its written: *mnfꜣ.t m stp nb n tꜣ jtr.w mj rw ḥrr ḥr tp ḏw.w* 'The soldiery of every picked man from the Nile land, they were like lion(s) roaring on the top of the mountains' (KRI V, 40. 10). We have already seen that the war-cry of the king and his horses is compared to that of a lion and in this rare New Kingdom description of the war-cry of the army we see that the soldiers can also be described in this manner.

Conclusion: War-Sound-Text

Musical instruments can be thought of as having agency which mediates and manages social relations (Blake and Cross 2015, 91). Music can be used to regulate situations of uncertainty on both inter- and intragroup levels, between individuals and with non-human agencies (Blake and Cross 2015, 83). It can inspire and enlighten and it has the capacity to change people's moods (Schofield 2014, 290). The sources analysed in this paper indicate the use of trumpets, drums and clappers in military parades in Egypt and the use of trumpets in the battle itself for signaling actions such as the embarking on the battle or taking over of an enemy fort. Trumpets were used in battle preparations such as inspections of stables and armouries but also in announcements and beginning of military campaigns. Trumpets and drums were used in triumphal return of the army from military campaigns. During festivals, trumpeters, drummers and musicians with clappers were part of the military parade. When tribute from foreign countries was received, the ceremony is followed by officials, military and musicians such as trumpeters and drummers, but also dancers.

This shows that music was essential part of military parades in various contexts, be that embarking on a military campaign or returning from it, but also in religious festivals. We know that triumphal returns from war were observed by the locals on the riverbanks (Spalinger 2013, 95–6) and that these events were mythologically framed (Matić 2017). They were also emotionally charged as indicated by the Second stela of Kamose. After his successful campaign, the king returns upstream to Thebes in the Inundation season and it is written: *jw ḥr nb ḥḏ(.w) tꜣ m rsf mry.t ꜥbꜥb.tj Wꜣs.t m ḥꜣb ḥm.wt ṯꜣy.w jwj r mꜣn=j s.t nb.t ḥpt=s sn.wj=s nn ḥr ẖr rmy.t* 'Every face was cheerful, the land was in disarray, the river bank was excited and Thebes was in festival. Women and men came to see me, every woman embraced her companion and there was no face in tears' (Habachi 1972, 42, 50, Fig. 27). Another such attestation is found on the Restoration Stela of Tutankhamun (Egyptian Museum in Cairo, CG 34183) where after the lines on slaves, singers, dancers and other subjects of the palace and the treasury, it is written that, among others such as gods and sanctuaries, *jdb.w m hy hn.w* 'riverbanks were in joy and jubilation' (Legrain 1907, 166). We have seen that military parades were also part of religious festivals and that recruits from different parts of the land were part of these parades. This was an opportunity for the king to present his forces to the land, but it was also an opportunity for these soldiers to show themselves to the populace and the king.

That sounds signified transformational events in ancient Egypt is richly documented (Manassa 2011). The sound of music, just as the presence of soldiers and police, could have played an important role in ordering the New Kingdom ceremonies and in indicating to the participants in which stages of the ceremony they find themselves. Thus, by hearing sounds of music they could have acted accordingly. Musicians provided sonic support to the disciplinary role of soldiers in such events.

Sounds also played an important role in New Kingdom Egyptian descriptions and possibly experiences of war. The war-cry of the king is said to come from the gods or is described as being god-like, sounding like Seth or Baal, and therefore as thunder. His war is like the one of a lion or a griffon and, being supersonic, reaches all corners of the world, from south (Nubia) to north (islands in the middle of Great Green). The war-cry of the army is described as roaring of lions on mountain tops.

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The curious case of priest Iufaa.
Preliminary remarks on texts on the inner side of the outer sarcophagus

Diana Míčková

The tomb of Iufaa and the inner side of his outer sarcophagus

The tomb of Iufaa is located on the shaft cemetery at Abusir, close to the pyramid complexes of the kings of the 5th dynasty, and is dated to the Saite-Persian period (Bareš and Smoláriková 2008, 8). The whole interior of the tomb is covered with magical and religious texts, sometimes accompanied by vignettes; with the exception of the ceiling, the lid of the outer sarcophagus and part of the western wall of the burial chamber, where hieroglyphs drawn in red colour, but not carved, are clearly visible. This means that the decoration remained unfinished because of Iufaa´s untimely death (this is probably also the reason why the lid and the ceiling stayed without any inscriptions or decoration). The unusually numerous religious texts in the tomb of Iufaa contain parts of well known textual corpora, e.g. spells from the Pyramid Texts, the Coffin Texts and the Book of the Dead or parts of the Amduat or Sonnenlitanei, but also many so far unattested texts.

The main aim of this article is to present the motifs and structure of the hitherto unknown texts from the inner side of the outer sarcophagus of Iufaa, which is extremely rich in such texts. The only known texts from this part of sarcophagus are some spells from the Pyramid Texts on the western and southern side of the sarcophagus and on the bottom, mostly consisting of the offering ritual and related texts (Hays 2012, 81-92). The rest of the inner side of sarcophagus is covered by hitherto completely unknown texts.

The most of these texts are written in vertical columns, some accompanied by vignettes and some are written in the form of tables. There is preserved polychromy visible on all the texts from the inner side of sarcophagus (red, black and blue colour), except for the bottom where the hieroglyphs are uncarved, written only in black paint.

The whole decoration is divided into five thematical parts – one covers the head and shoulders of the sarcophagus, two parts are situated on the southern and northern side, the third one covers the western side (feet) and the very ends of the sides of sarcophagus on both sides, and the last one covers the bottom.

As we can see already from the number of columns of each section, the texts are arranged very precisely. The above-mentioned large units of the texts on the sides always begin and end at the same column (with one exception, see below), which means that the decoration had to be composed specifically for that sarcophagus and planned very carefully long before it was drawn or carved, especially when we consider the many abbreviations and changes in the individual texts. Both sides of the sarcophagus should probably be read in parallel or should be "activated" at the same time. Based on the content of the individual texts, the northern side is more likely of a "ritual" character and the southern side is more "mythological", but this distribution does not hold completely, because the myths and rituals metioned in the texts correspond to and supplement each other.

The power and protection of the sun eye

The first part of the decoration, covering columns 1-12, starts in the middle of the sarcophagus and should be read from the first column (at the head) towards its both sides. Except for two different texts close to the bottom, columns 1-4 are covered with short spells, written in small columns, almost in tabular form, horizontally or vertically, that are mirror images of each other. The motifs of these texts have a strong connection to Heliopolitan religious ideas and contain topics of protection of sun god, manifestation of the sun eye, defeating enemies etc.

The first „table", written vertically, contains two texts. These texts are accompanied by a vignette, depicted on both sides above the spell, showing Ra with the head of a falcon with a sundisk encircled by an uraeus on his head, seated on his throne. He is holding the *was* sceptre in one hand and an *ankh* in the other. We can see red colour preserved on the sundisk, uraeus, the body of the god and parts of his throne.

The first spell is the speech of Ra, probably identified with the deceased, and contains references to several mythical events – we read here about the night of massacre and slaughtering in Heliopolis, with references also to Apis and the sacred cow *sẖꜣ.t.* The myth about the night of fights in Heliopolis is probably the same as the one mentioned in the Coffin Texts Spell 335 (CT IV, 282 a-c) and the Book of the Dead Spell 17 (Naville 1895, 24, BD 17 54-55), where is described how Ra defeated his enemies during that night.

The tomb of Iufaa generally contains numerous clear allusions to the mythical background connected with the region of Heliopolis, or the Nile Delta. Heliopolis is mentioned in several texts as an important religious area where mythical events take place. This city is sometimes written instead of other toponyms and localities (e.g. CT 167 III, 20a, where Iufaa writes Heliopolis even instead of heaven). Many religious concepts and ideas found in the tomb of Iufaa are also related to the wider Delta region, such as the motifs and texts connected to the city of Shednu (ancient Pharbaitos), appearing in ritual and mythological papyri, or motifs similar to the so-called legends of Delta (p. Brookyn 47.218.84, Meeks 2008).
The second text of the first part of the decoration deals with the topic of the „two daughters“, i.e. the two snake-goddesses (uraei) protecting the sun god/the deceased, their answers follow in the ensuing text and the last part describes the whole situation.

Columns 5-8 contain on both sides spells, written as speeches of four different goddesses, the manifestations of sun´s eye and its power: Wadjet, Satet, Bastet and Sekhmet. All four texts are probably variants of the same spell or part of the same ritual - their wording is exactly the same, only parts of it are changed. Iufaa himself turns into each of these goddesses and driving away an enemy who could harm him:

ḏd-mdw jn wꜣḏ.t j ḫft.j pf ḏd ḫm.t(j)=f(j) jw=f-ꜥꜣ m znj ngg jbḥ.w=k ḥm n(=j) jnk smꜣ.t ḫpr.n=j pw n smꜣ.t ẖtẖt ẖtẖt=k jm=k qq=k jwf=k ḫft.j ḫft.t ḥm n=j jnk wꜣḏ.t ḫpr.n=j pw n wꜣḏ.t
To be recited by Wadjet: Oh you foe, who says that he will destroy Iufaa! Do not come near, you who clatter your teeth, turn away (from me)! I am She who slaughters, it means that I became/have turned into Her who slaughters. Turn back! May you turn back and eat your own flesh! Male-foe, female-foe, turn away from me! I am Wadjet, it means that I have turned into Wadjet.

The texts in columns 9-12 are different on each side, but, judging by their content and length, they belong to the first part of the decoration of the sarcophagus, referring to Ra, the myths related to him, his defeating of enemies and the power and protection of the sun´s eye and its manifestations.
The text on the southern side appeals to two groups of gods/demons, both probably the guardians of gates under the supremacy of Ra. The second part contains Iufaa´s speech to Ra himself.

Columns 9-12 on the northern part open with describing of a situation, when darkness and storm clouds are driven away and the sun shines. A similar description frequently occurs in other texts, when a deity appears (e.g. Edfou I/2, 284, 8-17; I/4, 551,19-552,7; I/4 573-4 etc.) This is followed by a conversation between Iufaa, Ra and his daughter (here Hathor), dealing again with defeating the enemies of the sun god and of Iufaa.

The last part of the decoration of this section contains two texts close to the bottom. One of them is a speech to several gods, asking for their protection, and the other talks about the power of the bright eyes of the sun god.

Rituals of the new year

The second section of the texts covers most of the northern side of the sarcophagus, columns 13-50. The spatial arrangement of the texts mirrors that of the southern side, where the third section of texts covers columns 13-49. The extra column on the north is caused by the addition of the figure of a lector-priest, depicted at the end of this section, which breaks the last column in two shorter columns, but the actual space that is covered by text is the same.

Most of the texts from the northern side deal with the motif of the turn of year that is a frequent topic in the tomb of Iufaa, which contains plenty of texts, referring to the epagomenal days and the Egyptian new year (see below). The northern side of the sarcophagus mentions the praising of Ra on the new year, praising Sekhmet and Hathor, goddesses who were connected with the turn of the year (Goyon 2006) and who were in their warrior aspects considered as mother(s) of the god/demon Tutu or Nefertem (Kaper 2003, 60-61), both mentioned in different spells on this wall. These deities had power over demons whom they send to Egypt during the epagomenal days to spread out misery and illnesses all over the land. However, because they commanded these disease-demons, they could also calm them down and in that aspect they appear as benevolent and protective deities (Leitz 1994, 245). One of the reasons why Iufaa let these beings be depicted and mentioned in his tomb so many times can be his bad health. He suffered form a serious illness during his whole life (for more: Strouhal-Němečková 2008) and that probably let him to seek and copy ancient magical and medical texts and let them carved in his tomb, because he did not want to be ill in afterlife once again (Janák and Landgráfová, 2017).

The whole section ends with ritual of defeating Apophis, a motif very well known from the Egyptian ritual papyri, e.g. The Book of defeating Seth and The Book of repelling evil (p. BM 10252 and p. Louvre 3129, Schott 1929; Altmann 2010) or p. Bremner-Rhind (Faulkner 1933). This text was obviously very important for Iufaa, because the end of it is written on the southern inner side of the sarcophagus too, and the whole text is repeated again on the southern outer side of the sarcophagus. The text has two titles, one written at the beginningg: *dwꜣ rꜥ sḫr ꜥꜣpp - Praising of Ra and defeating Apophis*. The second title is situated at the end together with the depiction of lector-priest: *wrḥ m ꜥn.tjw - Annoinnting with myrrh*. Then, under the figure of the lector-priest, follows a short text describing the purpose of the whole ritual:

ḏd-mdw ḫft rꜥ dj=f sw sjn ḥꜥ.w m ꜥn[*.tjw*] *swḏꜣ s*(*j*) *pn nḥm pw m-ꜥ ḫ.t nb*(*.t*) *ḏw*(*.t*) *jw ꜣḫ n=f m-ḫt mn*[*...*] *sw m ẖr.t-nṯr*
To be recited before Ra, so that he might give that: to have the body rubbed with myrrh that makes this man prosper. It is protection from all evil things. It is powerful/useful for him after the mooring (i.e. death), *he being [...] in the realm of the dead.*

The fact that this text appears in Iufaa´s tomb more than once is an interesting point, because in the whole tomb hieroglyphs are of very small scale and many texts are abbreviated so much that they are very difficult to read and understand – the reason for that is probably the fact that Iufaa wanted to write in his tomb as many texts as was possible on this relatively small place. And here we see a fairly long text written twice and part of it even for the third time. Obviously this text had a special importace for Iufaa. Of course, the meaning of the ritual is to save Ra, defeat Apophis and return the world in the state of *maat*, but many texts in the tomb of Iufaa at least mention similar motifs. The important point was probably the part added according to Iufaa´s personal wishes and asking Ra for protection from ilnesses and state of being confined to bed, the threat that Iufaa was probably afraid of (in afterlife):

nḥm=k wj m-ꜥ ḫ.t nb(*.t*) *ḏw*(*.t*) *nḥm=k wj m-ꜥ sḏr.t wꜣḏ.tj ḏw nḥm=k wj m-ꜥ sḫ.t*(*j*) *ḏw ḫpr r=j jnk jn n=k ḥꜥꜥ rꜥ dr=f n=k ꜥ<ꜣ>pp*
Save me from all evil things, save me from permanent evil state of being confined to the bed, safe me from the evil net-catcher who would be against me. I am the one who brings you joy, Ra, he (who) drives Apophis away for you.

Throughout this whole section on the sarcophagus mostly benevolent aspects of deities that can be also very dangerous during the turn of the year are mentioned, contrary to the texts on the walls of burial chamber. Similarly the new year is mentioned, but not the epagomenal days. Even in the ritual of defeating Apophis, the fight itself is not mentioned, but only the situation when Apophis is already defeated and the state of *maat* is restored. One of the reasons why these themes are stressed on the inner side of the sarcophagus could be the fact that they are closer to the body of the deceased than the texts written on the walls of the burial chamber, where e.g. some dangerous aspects of the same divinities are mentioned. Avoiding potentially dangerous parts of texts was a common practice in ancient Egypt. Already in the Pyramid Texts, signs depicting dangerous animals were intentionally carved in halves, damaged or unfinished (Ritner 2003, 157, 164). Similarly, the name of Seth was sometimes omitted, a practice that became frequent from the Late Period onwards (Soukiassian 1981; Kahl 2004, 221–241).

Another reason could be its royal origin: in the royal purification ritual on the northern wall of the burial chamber, the topics of protection and power are stressed too, and the king/ritualist is presented here not as an endangered being, but as a mighty and powerful ruler/magician/priest. The same motifs are stressed in other (originally) royal texts, e.g. the main motifs of the Pyramid Texts, compared with the Coffin Texts or the Book of the Dead; or royal rituals, such as e.g. p. Brookyn 47.218.50 (the renewal of power on the new year, Goyon 1974), or mentioned royal purification ritual (p. Berlin P 13242).

Myths and legends

Most of the texts covering columns 13-49 on the southern side of sarcophagus are written in retrograde and all of them, except for the first one, deal with religious ideas connected with the Memphite region and Ptah, associated here also with Ra, the creator.

The texts of this section mention some aetiological myths, which is typical for ritual and mythological papyri from the Late Period onwards. Aetiological myths occur in different cultures especially in times when the original meaning or purpose of rituals performed in these cultures is forgotten or changed. New myths are then created to explain such rituals (Harrison 1912, 16; Hooke 1956, 43; for theories of function of aetiological myths in Egypt: Assmann 1977; Schenkel 1977; Sternberg 1985; Assmann 2003). This fits well to the cultural context of the Late Period with its typical archaization and return to ancient traditions (Manuelian 1994). The structure and content of Egyptian aetiological myths mostly differ from the preserved narrative myths or their parts. The reason is probably that they had a different function: mostly, they deal with supplements or postscripts to rituals or explanaitons of some phenomena, epithets, names etc. These myths are mostly very short and can serve also as didactical texts, reminders of some broader religious concepts, or may even have been recited during the ritual to which they belong (Jørgensen 2014, 42-58).

Most of the themes of the first text of the southern side come from the Heliopolitan cosmogony and local religious ideas. The main part of the text is formulated as a hymn to the creator god Atum, but it contains many digressions. The whole text is written as a speech of Thoth, who is talking to the Ennead and praises Atum in front of them. Most of the text consists of the mentioned hymn that is partly formulated as a description of a situation or narration of a story of creation (even the Ennead is mentioned in the 3rd person, although the speech is actually adressed to these gods) and partly as the actual speech to the Ennead. Neverthless, during his speech Thoth does not appeal only to the Ennead, but also e.g. to the demons that could be dangerous or could harm Iufaa. Except for these building blocks, there are also notes related e.g. to the situations or myths mentioned. These are probably real commentaries of the priest(s) or scribe(s), explaining some unclear points or refering or giving an indication to some other, unmentioned religious conceptions that later became (standard) parts of the commented text.

Such comments are nothing unusual in the case of texts that were transmitted for a long time, e.g. the rituals of defeating Apophis was enriched by a protodemotic commentary that explains some problematic passages in a contemporary language (Altmann 2010, 4). Even in the tomb of Iufaa we can find some examples of the very same practice – on the northern wall there is a mythological text, accompanying the royal purification ritual, that is composed from several text layers, in a manner similar to this text (Landgráfová and Míčková, forthcoming).

The following text is in tabular form and contains the praise of four manifestations of Ptah on the 25th day of the 2nd month of akhet.

The next text combines ritual and mythological aspects in a similar way and is, as the previous text, related to Ptah, but also mentions myths and religious ideas related to the sun god. The text opens with a ritual “scene”, describing bringing the *menekh*-cloth by a *sem* priest, followed by the hymnical part, asking the gods for protection from four demons/evil gods. Next, an instruction relating to the cloth appears again. After this part, the text continues in a completely different way: the next part of the spell deals with myths about the creation of the gods by Ra, how the fish became *but* in Egypt and about the origin of greatness and deficiency:

wn.ḫr jrf nṯr.w jpn ḥr ḫpr ꜥ3 wr m pr m r3{n}<=f> wn.ḫr jrf ḫpr m šnw.t=f ḏd.jn nb-r-ḏr mdw.n=j ḫpr ꜥš3=tn ḫpr ꜥš3.t pw jw=j r gr ḫpr ꜥnd m=tn ḫpr ꜥnd pw
The gods became powerful and great when they came out from his mouth and then (they) changed into his council. The Lord of all said: “I spoke and your multitude became.” This is how multitude came into being. “Now I will fall silent and deficiency will come into being among you.“ This is how deficiency came into being.

The following part of this section is written again in a tabular form. In the first line the myth of creation of Hu and Sia is told and then mentions of several gods identified with the senses of Ra follow, in a motif similar to a part of the Memphite theology (55), where the Ennead is identified with the teeth and lips of the creator. The table continues with four manifestations of Thoth, each of them identified with a different god, and in one case with an explanation of the origin of his name by a myth. Similar myth should be probably written about each of those hypostase of Thoth, particularly when at the end of text "these Thoths" are mentioned, but these myths were omitted (the reason can be a lack of space).

The next text, again a table, mentions several manifestations of Ptah, identified with different other deities. Behind the table follows a retrograde text that works as a commentary to the table. The text mentions that these gods "stand for Ra", which means that they can be his manifestations (Sauneron 1989). This text also mentions the *menekh*-cloth that appeared in the first text of this section that describes the worship of Ptah, as well as the silence of the sun god that occured in one of the myths in the same text. The whole text ends with the words *"until this day"* that is typical in aetiological myths, appearing in mythological papyri and priestly handbooks, where these myths very often accompany some ritual or explain some local forms of deities or religious concepts (p. Jumilhac II, 15-20; XI, 18-19).

The main purpose of the last two texts from this section is to provide protection for Iufaa. The first of them speaks about the protection of Ra and Iufaa against "The angry one" (i.e. Apophis, but identified with any foe). The second text is the previously mentioned last part of the ritual of defeating Apophis from the opposite side of the sarcophagus.

Connection with the decoration of the walls of burial chamber

The whole decoration of Iufaa´s sarcophagus is very closely connected with the religious ideas which appear in the whole tomb, specifically with the decoration of the walls of the burial chamber.

The above described text concerning the ritual of defeating Apophis (on the northern side) can be pointed out as a first example. The structure of the text differs from the other texts from the inner side of sarcophagus, although many of them also have ritual character. In the other ritual texts myths or their parts are written, notes and commentaries are added and the speakers often change – we can see dialogues between gods, between god(s) and Iufaa and also the changing of the 1st and 3rd person, depending on whether the speaker is Iufaa himself or some other (lector-)priest. The ritual in question on the other hand is just a speech of Iufaa, adressed to Ra, describing the situation, rejoicing over victory and asking the god for reward and protection.

Based on the topics and form it is possible that the text is originally a royal ritual, adapted and changed according to Iufaa´s preferences. There is another originally royal ritual in the tomb of Iufaa – the royal purification ritual (p. Berlin 13242: Schott 1957; Quack 2013) written on the northern and eastern walls of the burial chamber (Coppens *et al.* 2017, 613-626; Landgráfová and Míčková, forthcoming). This ritual has several preserved paralells (although there is none other complete version, like that of Iufaa appears to be), so we can conclude that this ritual was initially performed for/by the king, but it could obviously be used also by non-royal persons (and) as a funerary text. The depiction of the lector-priest at the end of ritual is a particularly interesting detail - in the case of purification ritual, a figure of the lector-priest follows each individual spell and on the inner side of sarcophagus, single figure of the lector-priest folows the ritual of defeating Apophis.

Another connection of the sarcophagus and the burial chamber is the god/demon Tutu, who appears on the northern side of the sarcophagus, but also, in a slightly different context, on the eastern wall of the burial chamber.

On the eastern wall, Tutu is depicted as a sphinx with the body of a lion, a human head with the *nemes* and uraeus on his forehead and with a tail in the form of a snake. He is labeled as "Tutu" () and is accompanied by the figures of Thoth with the *wedjat* eye in his hand and Horus; above the scene the names of three decans are also mentioned – *smd, jspd, ḫꜣ.w*. In the text, belonging to this vignette, Tutu is desribed as a god who creates the turmoil at the end of the year and all his seven demons are mentioned here name by name (Janák and Landgráfová, 2017).

On the outer sarcophagus, there is a vignette above the text too, depicting seven divine beings and divided into two sections. In the first register the god Tutu is depicted as a walking sphinx with the body of a lion, a human head with the divine beard and *nemes*, and tail in the form of a snake. Tutu faces a god in the form of a falcon, whose tail is once again a snake. Behind Tutu there is a standing figure with human body that has two snakes instead of his head. Each of these divine beings has a label with his name above his head. Tutu is named  - *ꜥmꜥm* (?). On the sarcophagus of one of the sacred bulls from Horbeit, Egyptian

Shednu or ancient Pharbaitos (JdE 86717), his name is written similarly – *ꜥm*. In this context, Kaper (2003, 120-121) mentions Tutu´s connection with Amemait (*ꜥm-mwt.w*), who appears from the Late Period onwards as a benevolent and protective deity (Seeber 1976, 182-184), but this connection is quite unclear.

Around Tutu, there are six other beings, probably *"the lords of Shednu."* The scene, very similar to this one from Iufaa´s sarcophagus, appears on two aforementioned sarcophagi of the sacred bulls from Shednu. On the first of them two groups of gods/demons are depicted and described as „the lords of Shednu" and *„living bau",* next to every group of them Tutu is depicted, facing the falcon god on a pedestal with snakes at the ends of his wings. On the second sarcophagus (JdE 86718) there is a similar scene. Here, the accompanying gods are called *"the lords of Shednu, sacred images in the Heliopolitan nome, secret images in the House of life".* These deities are part of the group of 77 gods/demons, connected with the city in the Delta, called Shednu (later Horbeit, today Abu Yasin), appearing in some ritual texts and their mythological background (e.g. the ritual of four balls or rituals of repelling evil, see below). They are probably manifestations of a local form of Horus, Hormerti (Cauville 1990, 115) and are closely connected with the region of the Delta. They do not occur in the underworld books or funerary texts, but in some cases, as the one of Iufaa, they can be mentioned in a funerary context. This occurence indicates the connection of „funerary" and „underworld" texts with real performed rituals (Manassa 2007, 621).

The number of these gods can differ, but mostly there are 77 of them. Their main function is a protection – they can appear as guardians of Ra, Osiris or the deceased, protect him and destroy his enemies, even Apophis, and also assist during the reunification of Ra and Osiris (Goyon 1985, 200-203). In the ritual of four balls (New York 35.9.21, Goyon 1975) they are praised among the deities guarding the bier and coffin of Osiris, and this papyrus also contains a part of a myth, connected with them: *You (e.g. Seth) have opened the secret chest that is in Heliopolis to see what is inside, (the chest) sealed by seventy seven gods!* (New York 35.9.21, 30). The „chest" probably means the coffin of Osiris that these gods sealed, guarded and protected, a similar mythological background was probably the reason why the gods of Shednu could be depicted on sarcophagi – they protected the deceased as well as they had protected the body and coffin of Osiris (Manassa 2007, 623). Concerning this text, there is also a strong connection to Heliopolis.

Another type of texts, where the gods of Shednu appear, are different rituals of repelling the evil. For example in the rituals for repelling Seth (Papyrus British Museum 10252, Papyrus Louvre 3129; Schott 1929, Altmann 2010) they drive away Seth. According to C. Manassa, this mythology has a strong connection with the 6th hour of Amduat, where Apophis is defeated – while the fight and defeating of Apophis takes place in underworld and is described in underworld books, ritual texts such as p. New York 35.9.21, 30 or p. Bremner-Rhind describe rituals that were paralelly performed on earth (Manassa 2007, 472).

The text below these demons on the sarcophagus of Iufaa does not describe Tutu, but focuses on these gods/demons. The structure of text is the same as the structure of the text belonging to Tutu on the eastern wall, as well as the structure of texts accompanying the images of mythological snakes and beings on the western and northern walls of the burial chamber. On the western wall several snakes are depicted, and to each of them belongs one text that describes the snake in details. Each of these texts begins with the phrase *„as for this snake"*, then the snakes´s appearance is described as well as its relation to the sun god, the descripiton of the earthly form of the divine snake, as well as the rituals and knowledge associated with each of the snakes (Janák and Landgráfová 2017). On the northern wall we can see several mythological texts, belonging to the ritual of the purification of the king during the coronation that explain the mythological background of this ritual (Coppens *et al.* 2017, 613-626; Landgráfová and Míčková, forthcoming). In these myths appear some mythological beings, very often again in the forms of snakes, and the structure of the texts accompanying them is very similar to the structure of texts mentioned above.

It is interesting to point out that the structure of these texts is almost the same as the structure of texts, where real snakes are described, as in the handbook of priests of Selket, whose work was among other things to heal people who were bitten by snakes (p.Brooklyn 47.218.48, Sauneron 1989; Janák and Landgráfová, 2017).

The text on sarcophagus begins with already known form *„as for these gods",* that is typical sentence occuring in texts with „encyclopedical" character (e.g. mentioned handbook of Selket´s priest):

jr nn <n> nṯr.w bꜣ.w ꜥnẖ.w nt{n}sn ḥn swḏꜣ. ḏ.t
As for these gods, the living bau, it is them who protect and refresh forever.

After the short descripiton of gods their relation to Ra is mentioned, specifically with his journey through the sky, then Iufaa´s knowledge about „this god“ (probably Tutu) and the description of his seat and chamber are mentioned, exactly the same way as in the case of snakes from the western wall:

jw=j rẖ.kwj sw n ḏd=j sw wnn=f m mr dmḏ m jꜣ.t pg m ḥqꜣ <ꜥnḏ> (...) jw=f m ꜥ.t wḏꜥ rn=s nṯsn wḏꜥ rꜥ ḥnꜥ ꜥ<ꜣ>pp jw gr wḏꜥ ḥrw jm ḥn<ꜥ> stš (...) rf rꜥ ẖrw=f mꜣꜥ r ꜥꜣpp
I know him and I will not say (=reveal) *it. He is in the canal that surrounds mound of Pega in the Heliopolitan nome (...). He is in the chamber the name of which is 'The one who arbitrates'. It is them who arbitrate between Ra and Apophis. Horus and Seth were arbitrated there.(...) Ra, his voice is rightful against Apophis*.

In the snake encyclopedia, this part is followed by the section mentioning ritual knowledge and prescriptions, but here this section is replaced by a mythological text.
The mythological part of the text is characteristic already by its verbal forms – these are typical for narrative (Malaise-Winand 1999, 653-666), not ritual or religious texts. This phenomenon is quite common in texts of ritual character, when their mythological background is mentioned. The same practice is known from the Late Period onwards in the case of mythological papyri (different kinds of priestly manuals and mythological handbooks), where can often be found (aetiological) myths, explaining ancient ritual practices or local religious habits, epitheths, aspects of the gods etc.

The mentioned examples clearly show that the decoration of the tomb of Iufaa is quite unique. There are plenty of texts that are so far unknown from any other contemporary tomb, many of them are even not known from any other source at all. Even the already known texts contain interesting changes and variants that can provide information about the work of the Late Period priests and scribes who could read and copy these texts and work with them. We can also see how the texts could be chosen and changed according to the wishes and preferences of the tomb owner, as well as is seen how carefully was the whole decoration prepared, the choice of the texts and also the spatial distribution.

The tomb of Iufaa contains many texts and motifs that are not common in the (so far known) contemporary tombs, but that appear in mythological and ritual papyri from the Late Perion onward. That suggests that Iufaa and/or the person(s) who worked on the decoration of his tomb had an access to some libraries or archives, where ancient religious texts were kept and that in the Late Period there were people who read, wrote and copied these texts and clearly understood them enough to be able to practice „philological work“. Beacuase of that it adds to our knowledge about how the Egyptian themselves perceived their ancient texts, language and religious concepts, changed them (or not), commented them and adapted them to contemporary (religious) ideas.

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One More for the Road: Beer, Sacrifice and Commemoration in Ancient Nubian Burials of the Classic Kerma Period

Elizabeth Minor

Introduction

The study of Classic Kerman commemorative feasting adds a contextual layer to the understanding of the practice of human sacrifice within this elite Nubian community. The unilateral hierarchy of power between king and subjects was expressed in part by the sacrifice of hundreds of individuals at the time of the death of the ruler (Reisner 1923a, 312). Within the rest of the community, less starkly defined social relationships also resulted in the sacrifice of two to six individuals upon the death of elite Kermans (Reisner 1923a, 65). Questions about how these social relationships were built during the individuals' lifetimes can be addressed through an investigation of elite Kerman burial equipment. This paper will address if the arrangement of funerary feasts can demonstrate one of the many ways in which social indebtedness could have developed during a Kerman's life.

In Classic Kerman elite graves, the provisions for the deceased in the afterlife can provide insight into social relationships beyond their basic function as magical, eternal sustenance. Through a re-examination of the Reisner Kerma excavation archive, patterns in arrangement of food and drink in elite graves can be shown to replicate how they would have been consumed during communal feasts by the living. In particular, the use of beer filter straws to sip from large pots demonstrates how group interactions took place in life, and then were reproduced in death. Comparisons with later ancient Nubian customs and contemporary ethnographic examples shows how this communal beer drinking would be one of many social practices that served to create and negotiate relationships with the Kerman community. Along with a web of other interactions, Kermans would have constructed relations of indebtedness to others during life that were ultimately repaid through the act of sacrifice.

The inclusion of multiple sacrificed individuals within the burials of Classic Kerman royalty and elites has been posed as an indicator for increasing social stratification during early Nubian state formation (Pearson 1999, 18, 166). Set alongside other indicators of rapidly increasing socio-political power on local and interregional scales (Minor 2012, 52), the Kerman king's execution of absolute control of his subjects is not unlike sacrificial practices found in global examples of early state formation. For example, Childe proposed that mass human sacrifices tend to appear and peak during the transition from a 'barbaric' to 'territorial state,' using now out-dated social classification categories (Childe 1943, 118). In a cross-cultural comparison of Egyptian Early Dynastic retainer sacrifices, Morris found that this generalisation must also consider questions of how this type of sacrifice is different than other ritualised killings, what agency the sacrifices had in the decision to submit to death, and if the practice could be sustainable to continue long-term (2014, 61).

In the case of sacrifices among non-royal Kermans, many layers of social negotiation must have taken place in order to create such a large power disparity. As will be further discussed in the next section, the difference in status between those Kermans who died a natural death and those who were sacrificed is not as clearly defined as between a king and subject. Morris' questions of agency and coercion are important to apply to this situation, as the Kerman community was in the midst of rapid social stratification (Minor 2012, 8). Swenson emphasises the 'performative effects' of sacrifice, in which the public act of killing becomes a dynamic part of institutionalising power disparities within 'historically specific structures of inequality' (2014, 32, 50). In this specific historical moment, Kerman elite were actively negotiating new social relationships in response to their polity's increasing political power in regards to Egypt (Minor 2012, 166, 192). In a system in flux, traditional arenas of interaction, such as feasting, can develop to hold new significances within a community.

This paper will use the excavation archive from G. A. Reisner's Harvard - Museum of Fine Arts, Boston expedition (1913-1916) to reassess the social mechanisms involved in the practice of human sacrifice at Kerma. Reisner's publication (1923a; 1923b) can be supplemented with unpublished detailed tomb cards, excavation photos, diaries, and object registers held in archives at the Museum of Fine Arts, Boston and the Sudan National Museum in Khartoum. Previous efforts to reconnect these archives with objects held in these museum collections have successfully reinterpreted this archaeological material to add new insights into socio-political developments during the Classic Kerma period (Minor 2012). As Kerma was a non-literate society, material culture holds the potential to reinsert this important kingdom's history into larger historical narratives (Minor 2012).

The Social Role of Sacrifice in the Classic Kerman Community

The elite Classic Kerman community incorporated human sacrifice in their burials on a smaller scale than the king, with a majority of subsidiary graves containing several individuals who were selected and coerced into death alongside the primary deceased individual (Reisner 1923a, 65). Outside of the stark social hierarchical relationship of king-to-subject, the relationship between non-royals who died a natural death and those who were sacrificed is not immediately evident. The first explanatory model put forth by G. A. Reisner in his excavation publications assumed that the individuals who were sacrificed had a subservient relationship with the primary deceased, styled as the *hareem* or servants destined to accompany their masters into the afterlife (Reisner 1923a, 69). Under Reisner's model, the sacrificed individuals would either be all female or would have osteological markers left by actions associated with manual labor and poor nutrition. Contemporary research provides dissenting evidence in which there is no statistically significant difference in health or physiological stress between sacrificial and non-sacrificial individuals. The diversity in sex and ages present in the sacrifices (Buzon and Judd 2008, 95) also demonstrates that a group of young females were not selected as eternal sexual partners, as would be expected under Reisner's *hareem* model. Instead, the sacrifices represent a cross-section of the Classic Kerman community whose social relationship with the primary deceased compelled them to be killed and interred with them. The means of killing is not evident from the human remains, suggesting that the mode of sacrifice was not overtly violent, perhaps using poisoning or suffocation (Judd and Irish 2009, 719).

By looking at the Kerman practice of human sacrifice through a lens of feasting and community relationships, our understanding can move away from a simple model of sacrifice as a 'barbaric' act of violence to that of a ritualised act within systems of social coercion. Researchers currently seek to contextualise ancient sacrificial practices into larger social themes of political power, religious frameworks, and social networks (Campbell 2014; Morris 2008; Porter and Schwartz 2012). Viewing the human sacrifices at Kerma as participants in a group burial, whether willing or not, brings the social connections between all of the deceased individuals into view. Although the primary deceased individual received the most elaborate burial equipment, each member of the interred group was arranged to take advantage of a sumptuous funerary feast, as will be demonstrated in this paper.

The evidence for Classic Kerman funerary feasts comes from sets of ceramic vessels that accompanied the primary deceased and sacrificed individuals. Stacks of beakers were placed in communal areas of graves, suggesting that the vessels were intended for group use in the afterlife. Graves with extraordinary organic preservation include woven giraffe-hair implements placed near the vessels; from comparison with ethnographic examples, it is clear that these tools were beer filter straws. Beer mash is also preserved in some instances inside the accompanying vessels. Beer provided an important source of nutrition in Nubia, as in Egypt, but more importantly, it played a prominent role in feasting. Investigating the practice of beer drinking using communal filter straws will show how this act of feasting built social relationships in life, which were then commemorated in death.

Sacrifices in Elite Subsidiary Graves

The burials of the Classic Kerma Period are located in the southern section of the Eastern Cemetery (Fig. 1). Four earthen tumuli that reach up to 100 meters in diameter contain the burials of the Classic Kerma kings, and each transverse corridor held up to 322 human sacrifices (Reisner 1923a, 312). The Classic Kerma elite subsidiary graves were constructed by excavating rounded rectangular pits into the fill of the royal tumuli burials (Fig. 2). By inserting their graves into those of the kings, the Kerman elites demonstrated their desired association with their rulers. The Kermans who commissioned subsidiary graves had a relationship with the king that afforded them this prime burial location, but did not necessitate their sacrifice at the time of his death.

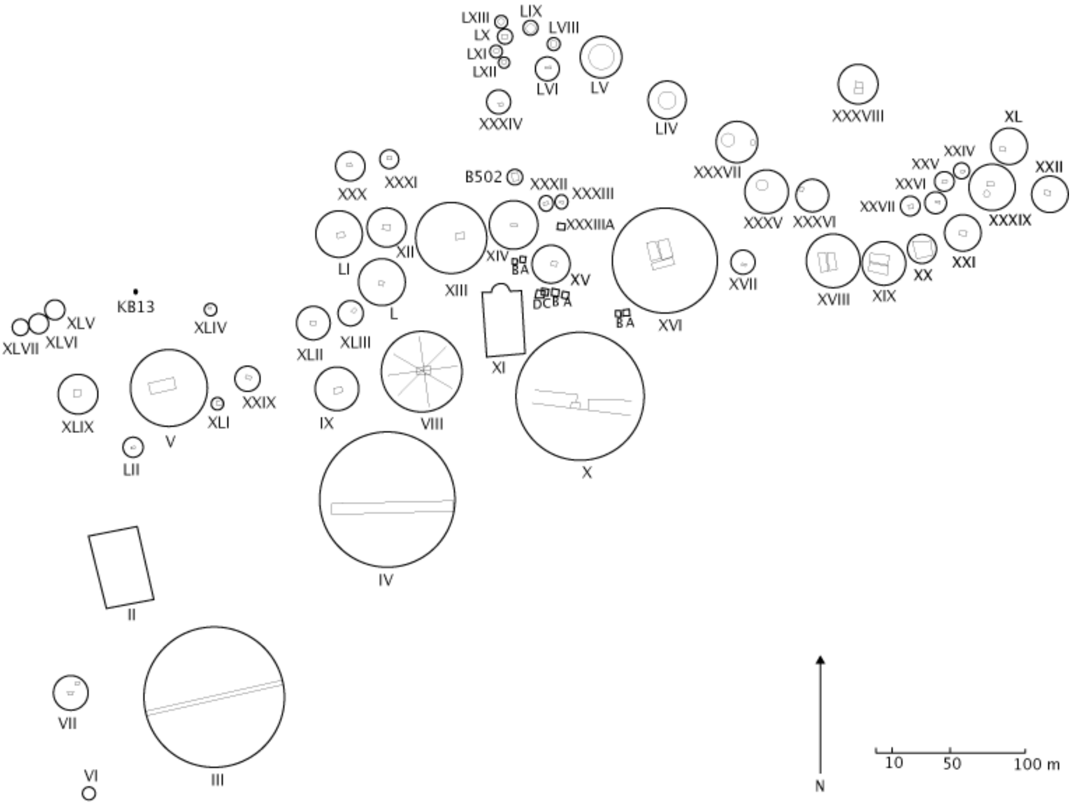

Figure 1. Map of Classic Kerma southern section of the Eastern Cemetery of Kerma (adapted from Reisner 1923a, plan III).

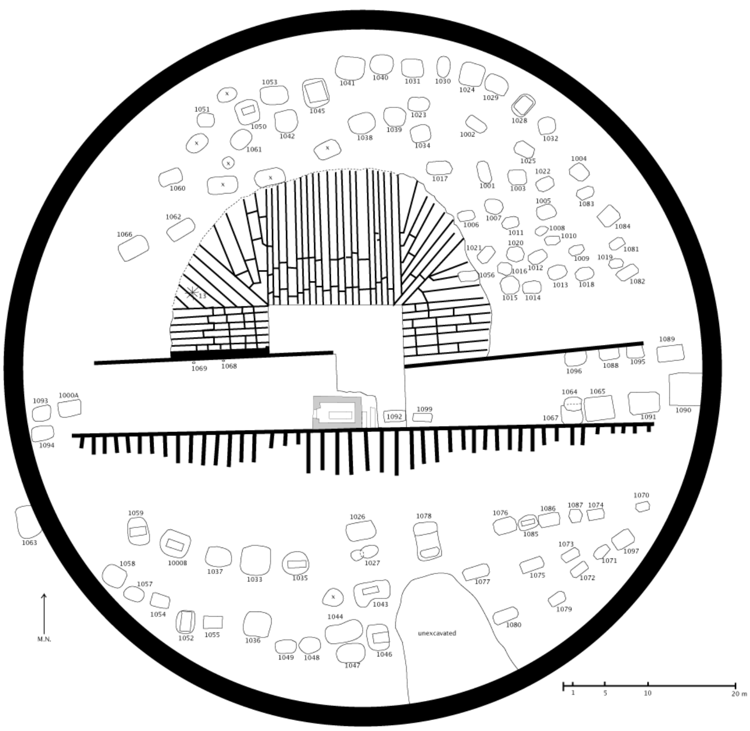

Figure 2. Plan of Classic Kerma royal Tumulus KX (adapted from Reisner 1923, plan XXI).

The practice of human sacrifice extended to the elite subsidiary graves, in which the primary deceased individual had their own set of sacrifices. Subsidiary grave K1065 (Fig. 3) offers an example of a typical and well-preserved Classic Kerman elite burial (Reisner 1923a, 352-5). The primary deceased individual (Body A) is laid on a funerary bed, and six additional individuals were sacrificed and included at the time of burial (Bodies B-G). The cause of death for the sacrifices is not evident from the skeletal evidence, which suggests poisoning or suffocation as the means of dispatch (Judd and Irish 2009, 719). The group burial was a single depositional event, as in many cases ox hides were preserved *in situ* laid out over the entire grave. This effectively seals the burials and demonstrates that all the individuals were buried at the same time (Minor 2012, 130).

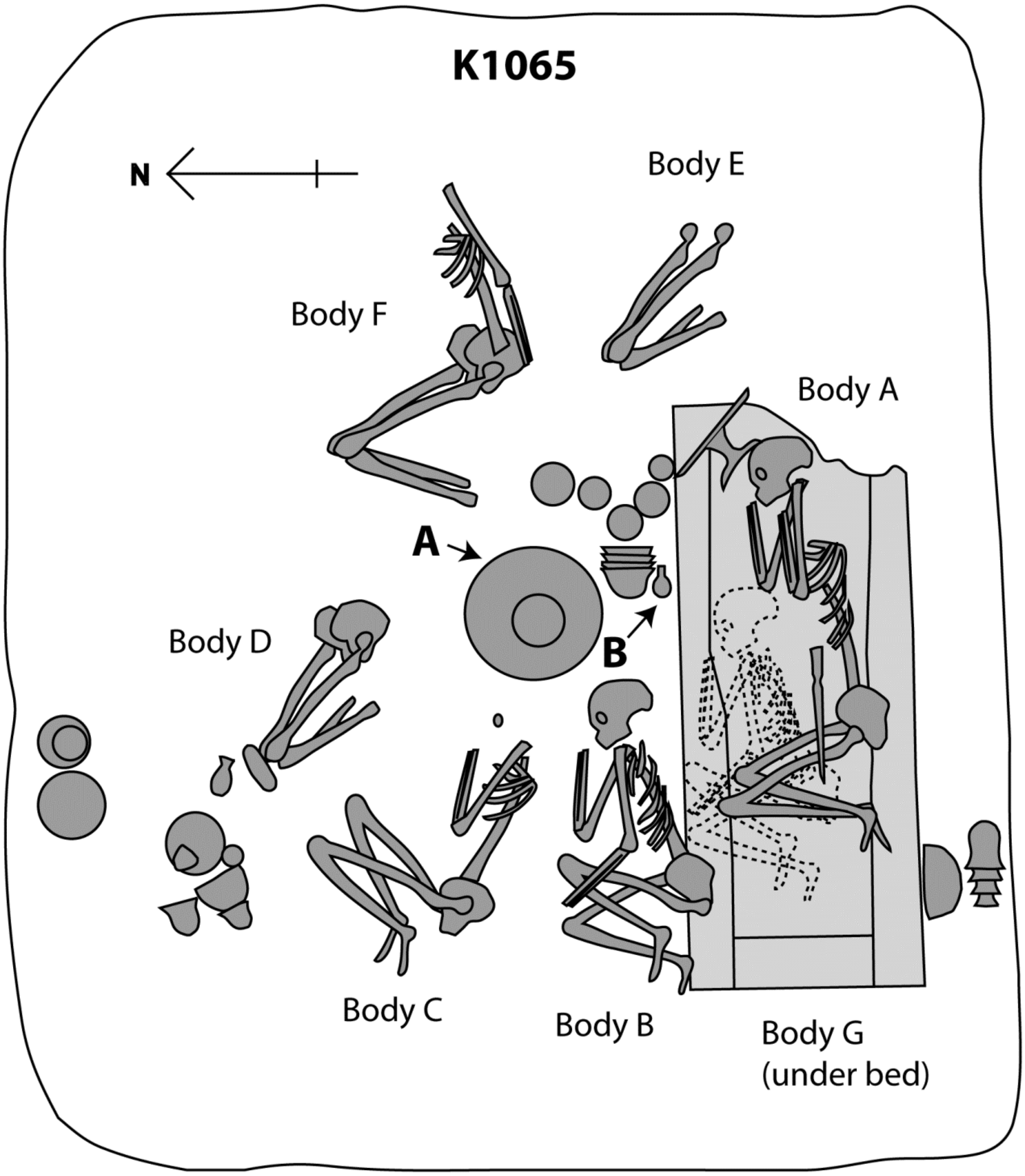

Figure 3. Plan of Classic Kerma elite subsidiary grave K1065, with (A) large jar and (B) giraffe hair beer filter (adapted from Reisner 1923a, figure 121).

The ritual of human sacrifice had its roots in earlier Kerman periods, while the Classic Kerma Period is the peak of its practice. During the second generation of the Classic Kerma Period, for example, within the Tumulus KX subsidiary burials 81 people were interred as primary individuals after experiencing natural deaths, while 190 sacrifices were interred with them (Reisner 1923a, 315). This burial group had an average of 2.4 human sacrifices per natural death represented in the preserved graves. Including the king and 322 sacrifices in the corridor (Reisner 1923a, 272-9), for 82 people who experienced natural deaths in KX, a total of 512 unnatural deaths accompanied them. The scale of human sacrifice undertaken at the beginning of the Classic Kerma Period perhaps was not sustainable, as the average number of sacrifices per burial decreased over the course of four generations. The first generation of the Classic Kerma Period (Tumulus KXVI) had an average of 2.6 sacrifices per grave, the second generation (Tumulus KX) had an average of 2.4 sacrifices per grave, the third generation (Tumulus KIV) had an average of 2.2 sacrifices per grave, and the fourth and final generation (Tumulus KIII) had an average of 0.9 sacrifices per grave.

Human sacrifice was performed on a decreasing scale along the social hierarchy of the Classic Kerman community, suggesting that this seemingly violent act was embedded in a related set of cultural practices. The king had the social power to force the death of more than 300 individuals to accompany him in the afterlife. Kings, almost by definition, were able to command or coerce mass compliance from their subjects, whether through construction of monuments or by following him into death. In comparison, how did the negotiation of social relationships in life occur farther down the social hierarchy within the Kerman community? How did these relationships then result in the coercion of other individuals to be sacrificed when an elite Kerman died?

Elite Classic Kerman Funerary Feasts

The placement of the funerary feast and its contents provides one potential answer to how social relationships were built in life and enacted in death. Communal beer drinking equipment was arranged in a manner that replicated its use in life during social events. The members of the group interred in the burial were laid out surrounding or next to the feasting set, as if they were waiting to consume the food and drink stored within it. Material culture can be used as a framework for understanding prescribed actions and decorum, as Walsh (2014) has shown with bodily performance in sitting and grooming in Classic Kerma society.

Figure 4. Classic Kerma serving vessels from grave K1065, including black-topped red ware beakers (Reisner negative number B1998, Photograph © 2018 Museum of Fine Arts, Boston).

The set of vessels included in elite Classic Kerma subsidiary graves is relatively consistent, though with variation (Fig. 4). Closed form vessels were used to hold food and drink for the funerary offering feast, while open form serving vessels were set in stacks around them (Reisner 1923a, 352-5). Serving vessels include the distinctive Kerman black-topped red ware beakers, with spouts in some cases, and this firing technique can be found on bowl forms as well in Classic Kerma graves. The number of vessels in the funerary feast sets is notable, for example subsidiary grave K1065 had a total of 22 vessels (Reisner 1923a, 352-5). What comestibles did the vessels contain, how was the set used, and what rules of decorum can we reconstruct by its placement?

Figure 5. Classic Kerma elite subsidiary grave K1065 during excavation (Reisner negative number C4396, Photograph © 2018 Museum of Fine Arts, Boston).

In the case of elite subsidiary grave K1065 (Fig. 5), a large jar was set at the centre of this burial and smaller vessels were set around it (Su.1075, Reisner 1923a, 353). In other graves the organic contents of the large jar are still preserved. For example, one jar from subsidiary grave K1053 has preserved contents of grain husks, most likely desiccated barley beer mash (MFA 14.1270 / Su.1075, Reisner 1923a, 342). My forthcoming study of residue testing will determine the species of the barley and look for the distinct chemical signatures for fermentation, especially the presence of 'beerstone' or calcium oxalate (McGovern 2010, 196).

Thick grain-based beers are known archaeologically throughout Eastern Africa and the Near East, but ancient Nubian beers take on distinct forms and social significance within a culinary tradition that bridges these regions. A study of carbon stable isotope signatures among Classic Kerma human remains found evidence for consumption of C4 plants, possibly sorghum and millet as would be used later predominantly for beer brewing in Sudan (Thompson, Chaix, and Richards 2008), although the preserved organics in the Classic Kerma graves seem to indicate these summer grains were not yet in use for brewing. Other evidence for ancient Nubian beer consumption is found through the distinct florescence of tetracycline, in this case a naturally occurring by-product of fermentation, present in skeletons from several Merotic and Early

Christian sites (Bassett, Keith, Armelagos, Martin, and Villanueva 1980; Hummert and Van Gerven 1982; Stokol and Armelagos 2002; Margolis 2013 and 2015).

Nubian beers are an important component of an East African / Sahelian foodway that was viewed as culturally distinctive in ancient times as well. Haaland (2007) has shown that the ancient African foodways of 'Porridge-and-Pot' are separate from the Near Eastern 'Bread-and-Oven' cuisine. Boiling, brewing, and serving grain-based food products in ceramic vessels has a long history of development in Sudan and Sahelian Africa, in contrast to the oven-baked breads that form the basis of ancient Egyptian and Near Eastern cuisine (Haaland 2007). Ancient Egyptians observed this culinary mark of difference between themselves and Nubians. Pope demonstrated that the extremely popular *iwš* offering at the Nubian temple of Sanam is likely a thick, porridge-like beer (2013, 489). Egyptian texts that deride Nubians as 'Gum Eaters' may be a derogatory pun referring to their unfiltered beer, emphasising culinary distinctions to form a cultural sense of 'otherness' (Pope 2013, 489). The preserved organics from Classic Kerma vessels in elite subsidiary graves fit within this later attested Nubian foodway, and provide early evidence for the presence and importance of beer in funerary feasts.

Beer Filters and Communal Feasting

The woven implement (marked B in Fig. 3) that was set next to the stack of beakers and the large jar (marked A in Fig. 3) in K1065 provides further evidence that the large jar contained beer. Eight other examples of this type of implement were preserved in other Classic Kerma graves (MFA 20.1411 / 13-12-624 from grave K308; MFA 20.1427 / 14-2-954 from grave K333; MFA 20.1410 / 13-12-209 from grave K415; 13-12-1005 from grave K430; Su.799 from grave K1039; Su.1106 from grave K1060; Su.1012 from grave K1065; 14-3-822 from grave K1088 (Reisner 1923b, 313; Minor 2012, 161)). They are spheres of giraffe hair with a decorative basket weave (Fig. 6), which Reisner originally thought were fly-whisk handles (Reisner 1923b, 313-5; Bonnet 1990, 231). The basketry sphere is bulbous and the opening is narrow and elongated. In three examples (Su.1012, 13-12-1005, and 20.1427 / 14-2-954), a piece of cane or hollow wood was preserved set inside of this opening (Reisner Negative C6472; Minor 2012, 328). Bonnet and Valbelle suggest that these giraffe hair implements were used as beer filters (2000, 96), and one example was found in situ inside a large jar (Grave K1088, giraffe hair 14-3-822, inside white-slipped red ware jar MFA 20.3416 / 14-3-817; Reisner 1923a, 364-5).

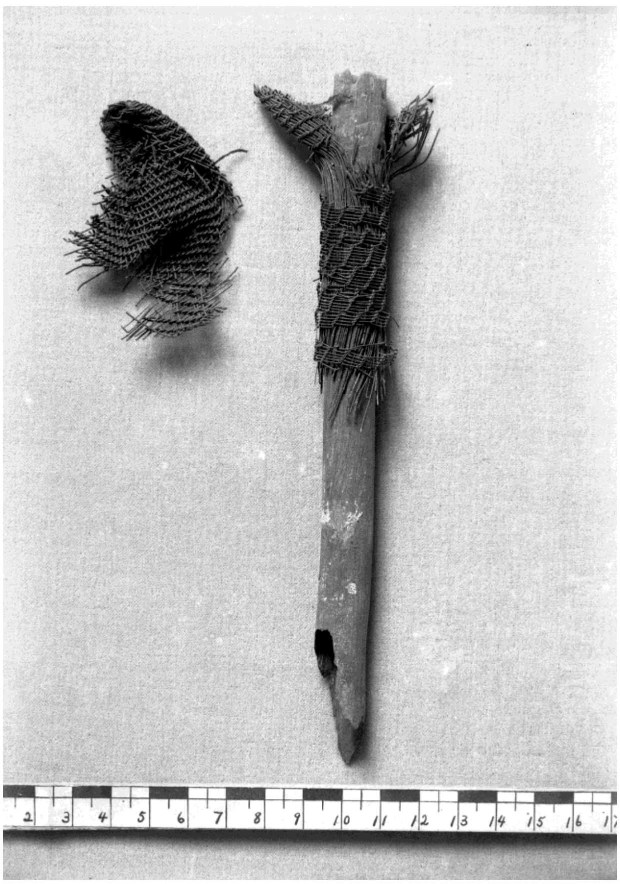
Figure 6. Woven giraffe hair beer filter with preserved straw (Reisner negative number C6472, Photograph © 2018 Museum of Fine Arts, Boston).

A comparison with ethnographic examples from East Africa illustrates how the woven giraffe hair implements were used to filter beer during communal feasting. An analogous example can be found in beer filters from Uganda collected while in use during the 1960s (Fig. 7). Although the contemporary filters are less bulbous, they provide an ethnographic model for how the Kerman examples would act to remove husks from the mash of the beer (Phoebe A. Hearst Museum of Anthropology 2017). In Uganda, the straws are long and decorated for individual use, enabling every participant sit in a circle and reach a central pot at the same time.

Figure 7. Woven fiber beer filter with straw, Uganda, 1960s (Courtesy of the Phoebe A. Hearst Museum of Anthropology and the Regents of the University of California (5-13634)).

Communal beer drinking with straws is found in contemporary African traditions throughout the region of East Africa. In these historical cases, the most common type of beer was made from sorghum or millet, where the mash is brewed in a large vessel, and the same large vessel is used for serving to the group. Participants use individual filter straws to drink from a central beer pot (Dietler 2001, 98; Haaland 2007, 166), but this is a recent change from a single shared filter straw. For example, in Eastern Uganda the traditional social rules were for the participants to share a single straw and pass it to the next person after three minutes for their turn to drink (Odeke 2007). Modern health fears about spreading tuberculosis have led to the use of individual straws that are decorated for ease of identification, while government regulators have tried to shut down household brewing (Odeke 2007). Participants view their group drinking practices as an act that connects them to their pre-colonial African traditions, as described by Flora Aduk from Uganda:

'Homemade brews are part of our heritage as Africans. Before the days of colonisation a lot of our socialising and activities were in one way or another connected to our brews. So let's just improve on the quality and set standards so that we can maintain our identity and celebrate Africa with Africa's own. Alcohol can cause harm to us irrespective of what type it is so if you must drink why not let it be something local' (BBC News 2005).

There is pictorial evidence for communal beer drinking using straws in ancient Nubia, although it comes from the significantly later Meroitic Period. A graffito from Musawwarat es-Sufra shows two men sharing a pot of beer, each with a straw to filter out the mash (Edwards 1996, 73; Pope 2013, 477). The placement of beer filters alongside the Classic Kerman funerary feast vessel set strongly indicates that communal beer drinking through filter straws was a practice during this period. The aim of this paper is not to argue for a direct evolution from ancient Kerman beer drinking practices to contemporary African examples, but rather to suggest that Kerma provides one example of diverse forms of a related practice set within a larger East African context.

However, this shared practice is an important early example that draws connections between ancient Nubian and more widespread East African foodways and cultural practices. Edwards (1996, 65) has suggested that the 'Labour-Beer-Labour' circle in traditional Sudanese societies, such as in Darfur and Nuba and with the Nuer, can provide a model for social practices in late Kushite groups, such as the Meroitic Kingdom and the X Group. In this exchange cycle, community members provide labor for others and are thanked with a feast that includes drinking beer from a communal pot (Edwards 1996, 71). The communal consumption of beer seen at Kerma similarly could act to create and negotiate social relationships within the elite community. Kerman community members could have intentionally negotiated relationships through feasting during life, with the exchange of consumables as a mechanism of ‘indebtedness engineering’ (Firth 1983, 89; Dietler 2001, 79).

Dietler’s (2001, 66) discussion of the commensal politics of feasting also speaks to a wider East African tradition of using beer to build relationships of indebtedness. Beer is ‘embodied material culture’, something that is made by people to be consumed by others. As the gifted product is imbibed, a connection is built between participants and social expectations are created that then dictate how the receiver must reciprocate. By bringing participants together through culturally prescribed gifting and receiving, feasts ‘simultaneously define relationships and boundaries’ (Dietler 2001, 78). Collective work events, such as the Labour-Beer-Labour reciprocal exchange described by Edwards (1996, 69), were employed historically as a strategy for labour exchange and social relationship building in many areas of Africa where societies had a ‘multi-centric’ or emerging political leadership (Dietler 2001, 80). The scope of work involved could range from monument construction to sustenance farming, and could cross-cut social hierarchies and genders. For example, women hosted work parties to prepare fields in the Tiv tribe of Nigeria and repaid the labor through home-brewed beer (Dietler 2001, 92).

The arrangement of the Classic Kerman sacrifices in the subsidiary graves as participants in a communal funerary feast suggests that they could comprise a group who were formed similarly through negotiated relationships of indebtedness during their lifetimes. The diversity of ages and sexes included among the sacrifices, as well as the overall comparable health indices (Buzon and Judd 2008, 97), also suggest that the Kermans who were coerced into death as sacrifices for the primary deceased individuals belonged to a relatively comparable social class. The sacrifices were not markedly young or old, predominantly male or female, nor had they experienced poor health or physical hardship. Instead, the sacrificed individuals could have been members of the community who found themselves entangled in a net of social obligations that ultimately led them to be beholden to accompany the primary deceased into the afterlife. The final, group-oriented funerary feast was arranged to perpetuate one of the cultural practices that contributed to these social obligations.

Comparing Group and Individual Funerary Offerings

The group-oriented funerary feast offerings used in the Classic Kerma elite subsidiary burials present an interesting contrast in cultural practices with the function of individually-oriented funerary offerings in ancient Egypt. The underlying pattern for ancient Egyptian funerary offerings was set up with a focus for one person, the deceased. The family came to leave standardised offerings on a regular basis, or employed a *k3* priest to do so for them in proxy. The offerings themselves were often compartmentalised, even in single serving offering tables such as in the Old Kingdom at Giza (Giza Archives Project). The surviving family members then commemorated the deceased on continual intervals during their lives.

Ancient Egyptians had their own very standardised set of food and drink as an offering feast, based in the ‘Bread and Oven’ Near Eastern tradition (Haaland 2007; Pope 2013). Evidence exists that Egyptians drank beer from straws in some cases, such as a rare depiction of a man drinking from a straw in a beer pot on a stela from Amarna, although his type of pointed beard suggests that he was Semitic or Western Asian (McGovern 2010, 247). Egyptian funerary feasts had decanted drinks brought by servers in single serving cups, which could either be beer or wine, with wine having an association of being higher-class (Dietler 2006, 237). Near Eastern straw filters were not made of basketry, but rather from pierced ceramic or metal cones (Homan 2004, 86).

In contrast, in Classic Kerma elite burials the funerary feast was arranged for the group of individuals interred together in the grave. The primary deceased individual was laid on a funerary bed, and sacrifices were arranged around them. The sacrificed individuals had diverse levels of personal adornment, sometimes even rivalling that of the primary individual. Offering serving ware is not compartmentalised for one individual, instead it is arranged in a set in the centre or corner of the grave. In this group burial arrangement, an individual’s social connections were cemented for the afterlife by literally bringing the others with them in death.

Figure 8. Classic Kerma funerary feast vessels, including tall ridged vessel meant to emulate a stack of beakers (Photograph © 2018 Museum of Fine Arts, Boston).

The communal nature of feasting can be seen in more detail in the arrangement of the vessels, either in the centre or stacked up at side of the Classic Kerman elite subsidiary graves. Grave K1039 is an example where the feasting was set along the side of the grave (Reisner 1923a, 331), the tulip-shaped black-topped red ware beakers are stored as stacked sets, ready to be used for serving the funerary feast. Over time the Kerman potters adapted a short-cut by which the stacks were imitated with modelled ridges on the sides of a tall, single vessel (Fig. 8) (MFA 20.2094 / 13-12-587; Reisner 1923b, 378). Moving away from a usable version to a stand-in or prop for funerary purposes suggests the intentionality and importance of the feasting vessel set for religious purposes.

Not every Kerman had the social capital or connections to coerce others to be sacrificed. The individual in K431 is unusual as they are interred in a single grave with no personal adornment, but still equipped with a beer jar and serving vessel (Reisner 1923a, 221). The basic sustenance of beer was essential for the afterlife, although this individual had not built the social capital necessary to create a network and compel others to be sacrificed to accompany them.

Conclusion

The placement of communal beer vessels and drinking equipment in elite graves demonstrates the social nature of imbibing alcoholic beverages in the Classic Kerma culture, and how this act was one of many means to build relationships within the community. On a fundamental level, the food and drink included in a typical elite grave were likely meant to provide sustenance for the afterlife. The arrangement of the feast, however, illustrates social relationships between the individuals interred in the grave.

The communal feasting tradition that had acted to build social relationships in life was replicated by the arrangement of serving vessels and drinking equipment in elite Classic Kerman burials. As in life, the beer stored in a single large vessel was intended to be shared among the group, with each participant drinking in turn from the filter straw. The food stored in larger vessels was served to others in smaller beakers, set in stacks nearby.

This process of consumption was one of many actions that worked to negotiate and reinforce the social relationships between the participants. In death, these relationships were manifested through the coercion of individuals to be sacrificed to accompany the burial of the primary deceased individual. The carefully arranged beer equipment was brought into the mortuary context, ready to be tapped to continue to commemorate these relationships in perpetuity.

The lack of violent marks on the skeletons and the overall similarity in health markers between primary deceased and sacrifices fits well with this scenario. As Buzon and Judd determined in their 2008 study, there are no significant differences in health between the sacrificial and non-sacrificial Classic Kermans, especially in indicators of physiological stress. This evidence does not fit a model of Kerman human sacrifice being a practice in which servants and/or wives were violently forced to die to accompany their masters. Instead, Kermans may have found themselves entangled in a complex net of obligations and social debts to others of higher but comparable social status, which could ultimately be reconciled by a permanent, terminal payment. The relationships built through feasting are one of many potential areas in which such debts could be incurred.

Looking at the practice of human sacrifice at Kerma through this lens of social relationships helps move it away from a seemingly exceedingly violent act to a social practice that served to connect the dead and living in a most literal way. Almost as if there was one last dinner party to be held, with one more drink for the road.

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Old Kingdom sarcophagi – The Abusir corpus

Věra Nováková

Introduction

In 1969 Italian Egyptologist Anna Maria Donadoni-Roveri published a fundamental monograph on Old Kingdom sarcophagi *I sarcofagi egizi dalle origini alla fine dell' antico regno.* She provided a basic overview of the development of burial practices from the Archaic Period to the end of the Old Kingdom with regard to the cases used for burying the deceased. Her study focused on the materials used for the sarcophagus' manufacture, its iconography as well as the texts carved on its chest and lid. Typologically, she distinguished three basic types of sarcophagus dated to the Old Kingdom based on the shape of their lids (Donadoni 1969, 62): sarcophagi with a flat lid; sarcophagi in the form of the hieroglyphic sign '*ḳrsw*', with a vaulted lid with rectangular end pieces; and sarcophagi imitating in its shape the stylised embalming hall '*zḥ nṯr*', with a lid with a cavetto cornice. An integral part of her work formed a catalogue containing 113 entries of both royal and non-royal sarcophagi found in the Memphite cemeteries. The core consists of sarcophagi from Giza and Saqqara, but does not include sarcophagi found in the Abusir necropolis documented and published by Ludwig Borchardt at the beginning of the twentieth century (Borchardt 1907). Since Donadoni's work was published, a roughly equal amount of new sarcophagi, i.e. over 100 examples, have been discovered. The number derives from an updated version of an electronic database of Old Kingdom sarcophagi assembled by the present author within her MA thesis *Stone sarcophagi in Egypt during the Third Millennium BC* (Štěpánová 2011).

The aim of this article is to provide an addition to Donadoni's work by presenting the corpus of Old Kingdom sarcophagi found in Abusir, both by L. Borchardt in the early 1900s as well as during the last fifty years by the Czech (previous Czechoslovak) mission. This Abusir corpus constitutes about one third of all the new finds available up until today, including almost 40 objects dating mostly to the 5th and to the 6th dynasties (see Table 1). The finds from two distinct parts of the necropolis – the royal necropolis at Central Abusir and the non-royal necropolis at Abusir South – will be compared, in particular the differences and particularities in terms of typology, material, dimensions and decoration. In addition, a comparison of the Abusir corpus with their counterparts found in Giza and Saqqara will be included (although sarcophagi also began to appear sporadically in necropoleis outside the residence from the reign of Nyuserra onwards, e.g. in Hagarsa, Edfu and Gebelein. This accounts for a minority portion of all finds as the vast majority of sarcophagi comes primarily from the Memphite necropolis; see Table 1).

Dyn.	Abu Rawash	Abusir	Abydos	Dahshur	Edfu	Gebelein	Giza	Hagarsa	Iunu	Meidum	Saqqara	Zawijit el-Arjan	Tot.
3				2							6		8
4	6			1			41			1	2	1	52
5	6	30			1	1	27	2			17		84
6	2	8	1				17		4		49		81
Total	**14**	**38**	**1**	**3**	**1**	**1**	**85**	**2**	**4**	**1**	**74**	**1**	**225**

Table 1. Spatitial distribution of sarcophagi during the Old Kingdom.

The royal cemetery at Central Abusir

The spatial distribution of known sarcophagi from the Old Kingdom reflects both the social status of the tomb owner (see below), but also a direct relation between the tomb's location and the royal mortuary complexes (in the 4th dynasty most known sarcophagi derive from the Giza necropolis, while in the 5th dynasty their occurrence follows the shift of the pyramid complexes to North Saqqara and Central Abusir).

Thus throughout most of the 5th dynasty, the cemetery of members of the royal family, as well of high officials, was located in the vicinity of the royal pyramids in Central Abusir (see e.g. Verner 2002; Verner 2014; Krejčí 2010) (Fig. 1). A total of 22 sarcophagi, all dated to the 5th dynasty, were found in this area up until today.

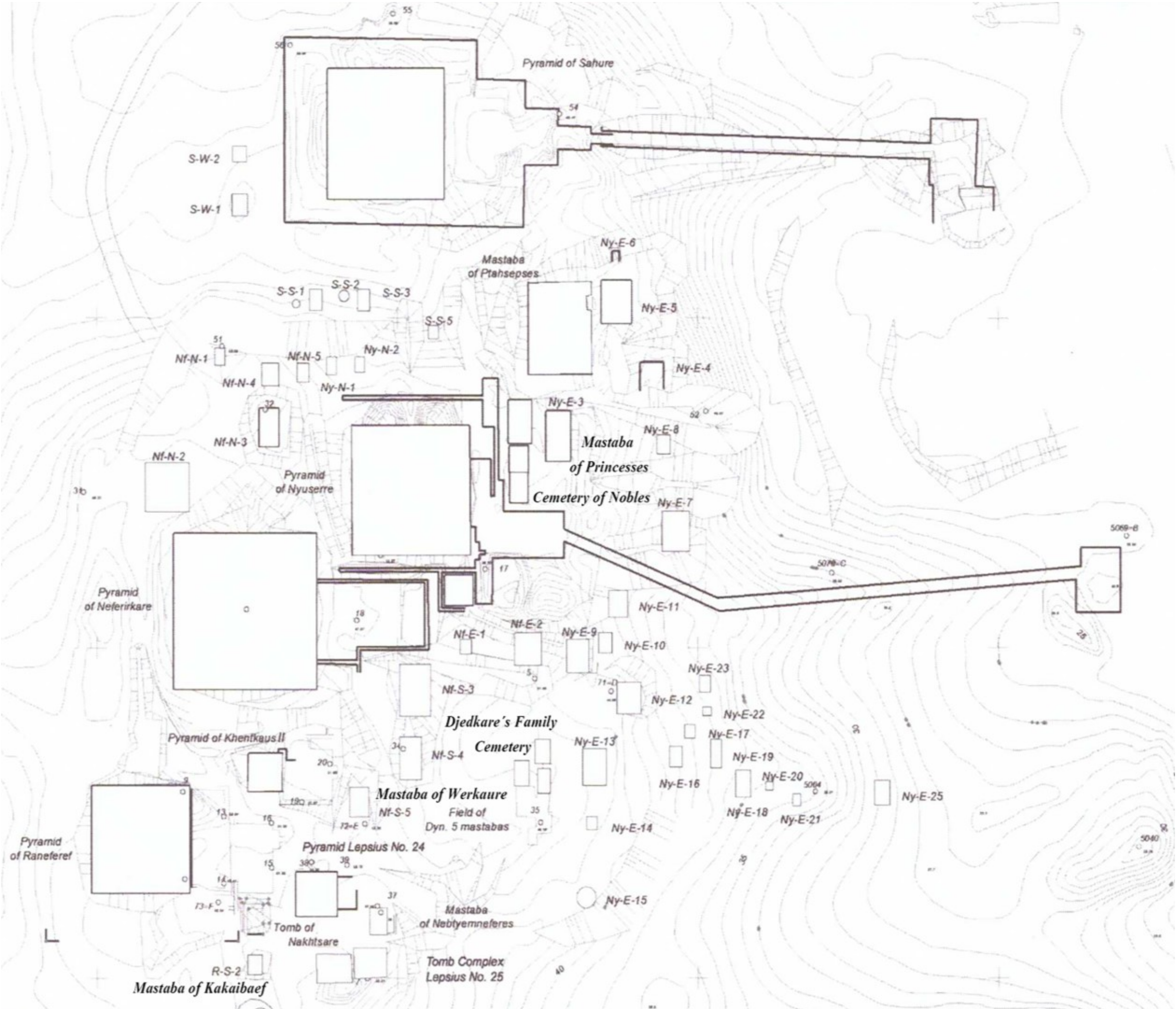

Figure 1. Schematic plan of the Abusir pyramid necropolis (after Krejčí 2010: Fig. 15.2).

Sarcophagi of the king and the royal family

Only two preserved sarcophagi from Central Abusir belonged to royal owners: the sarcophagi of Sahura (Perring 1842, 5; Vyse 1840, 16) and Raneferef (Verner 2000, 561–80); both found in a fragmentary state. Nevertheless, the type of the lid of the latter mentioned sarcophagus could be reconstructed as vaulted with rectangular end pieces. L. Borchardt could not properly investigate the burial chambers of Neferirkara and Nyuserra due to their bad overall state of preservation and not a single fragment of either sarcophagi was found (Borchardt 1907 and Borchardt 1909). A possible burial place of Shepseskara in Abusir remains to this day ambiguous (see Verner 2000, 581–602, Krejčí 2010: 13–14). The majority of sarcophagi found in Central Abusir belonged to members of the royal family: king's wives or royal children (Chart 1).

One group of sarcophagi comes from tombs located to the east of the pyramid complex of Nyuserra (Borchardt 1907); it includes the so-called Tomb of Princesses apart from several tombs of officials (see below). The Tomb of Princesses belonged, according to the titles of their owners, to members of Nyuserra's family (Borchardt 1907, 127–128). The burial chambers of princess Khamerernebty, an anonymous princess and prince Kahotep all contained limestone sarcophagi with vaulted lid and rectangular end pieces. No measurements of the sarcophagi or any other details were recorded.

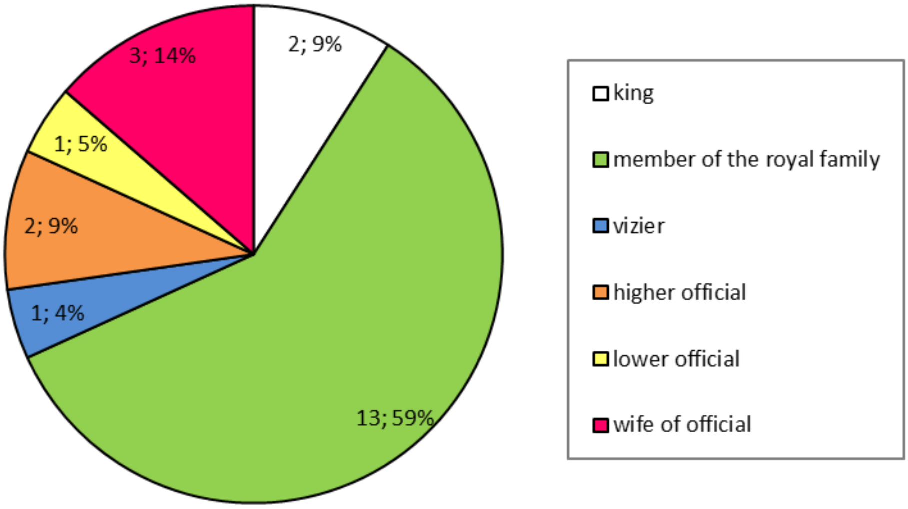

Chart 1. Abusir Central – social stratification of sarcophagi's owners.

More detailed information is available from slightly younger tombs, located in Djedkara's family cemetery, which is situated to the south-east of Nyuserra's mortuary temple and was explored in 1978 by the Czechoslovak mission (Verner and Callender 2002). It includes six tombs of the king's children and officials associated with them. Here, the tombs of princess Khekeretnebty, princess Hedjetnebu (Fig. 2) and the anonymous lady L still contained the owners' sarcophagi all carved of limestone. In the burial chamber of anonymous lady L no lid was found, but the sarcophagi of Khekeretnebty and Hedjetnebu contained vaulted lids with rectangular end pieces. The largest one belonging to Khekeretnebty and the smallest one to Hedjetnebu. The sizes most likely reflected the importance of the interred persons – the titles, architectural design and decoration of the tomb of Khekeretnebty confirm her elevated position among the others buried in this cemetery (Verner and Callender 2002, 133–40).

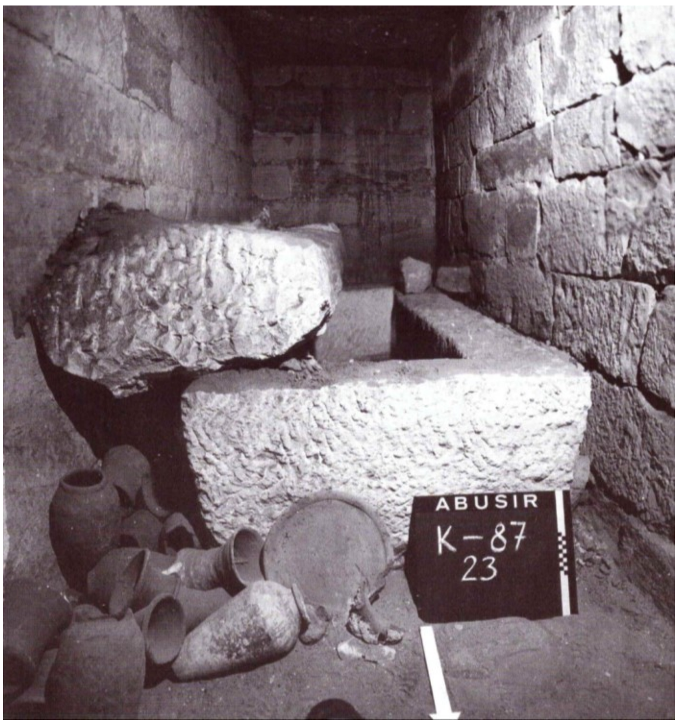

Figure 2. Sarcophagus of Hedjetnebu [AC 19 (K)] (after Verner and Callender 2002: pl. XXI, Kf4 © Czech Institute of Egyptology FA CU).

Between 1981 and 1987 the excavations in the southern part of the pyramid field, to the east of Raneferef's pyramid, uncovered some minor tombs of members of the royal family of the mid-5th dynasty: the pyramid of Khentkaus II (Verner 2001), the pyramid Lepsius 24 of an unknown queen (Krejčí *et al*. 2008), the mastabas of Nebtyemneferes (Krejčí *et al*. 2008) and of prince Werkaura (Krejčí *et al*. 2014). Only fragments of sarcophagi were found in the former two pyramid complexes. A single upper corner fragment of the sarcophagus chest survived of Khentkaus II's sarcophagus, providing no information on the form of its lid (Verner 2000, 566; Jánosi 2001, 148, fig. 70). Traces of white stucco on the inner surface of the fragment indicate that the interior of the chest was originally cased with limestone slabs (see the sarcophagi of Ptahshepses and Khamerernebty) (Verner 2000, 566). The fragments of the sarcophagus of the anonymous queen (the supposed wife of Nyuserra, see Krejčí 2010, 129–30; Verner 2014, 61–75) showed that the lid was vaulted with rectangular end pieces provided with relatively large protrusions on the shorter ends. Both sarcophagi of Khentkaus II and the anonymus queen from Lepsius 24 were made of red granite, and their reconstruction enabled a general estimation of their dimensions, which are very similar to one another (see Table 2 and also Verner 2000, 561–580, tab. 3).

Sarcophagus's owner	Social status	Dyn.	Tomb no.	Material	Length of chest (m)	Width of chest (m)	Height of chest+lid (m)	Type of lid
Sahura	king	5	AC 1	basalt/greywacke	-	-	-	without a record
Raneferef	king	5	AC 31	granite	2,70	-	-	vaulted with rectangular end pieces
Khentkaus II	member of the royal family	5	AC 14 (A)	granite	2,30	0,90	1,00	-
anonymous	member of the royal family	5	AC 22 (J)	granite	2,40	1,21	(60+x)+50	vaulted with rectangular end pieces
Khamerernebty	member of the royal family	5	AC 10	limestone	-	-	-	vaulted with rectangular end pieces
anonymous	member of the royal family	5	AC 10	limestone	-	-	-	vaulted with rectangular end pieces
Kahotep	member of the royal family	5	AC 10	limestone	-	-	-	vaulted with rectangular end pieces
Nebtyemneferes	member of the royal family	5	AC 23 (M)	limestone	2,70	1,00	1,24	flat, slightly vaulted along the longer axis
Werkaure	member of the royal family	5	AC 26 (T)	limestone	2,52	1,50	-	-
Kakaibaef	member of the royal family	5	AC 29	limestone	2,10	1,20	-	-
anonymous	member of the royal family	5	AC 31	limestone	-	-	-	-
Khekeretnebty	member of the royal family	5	AC 15 (B)	limestone	2,90	1,20	1,55	vaulted with rectangular end pieces
Hedjetnebu	member of the royal family	5	AC 19 (K)	limestone	2,26	0,70	1,30	vaulted with rectangular end pieces
anonymous (lady L)	member of the royal family	5	AC 20 (L)	limestone	2,40	1,10	-	-
Faaf, Idu	lower official	5	AC 17 (D)	limestone	2,65	1,10	1,35	flat, slightly vaulted along the longer axis
wife of anonymous official	wife of official	5	AC 6	limestone	-	-	-	vaulted with rectangular end pieces
anonymous	higher official	5	AC 6	limestone	-	-	-	vaulted with rectangular end pieces
Weserkafankh	higher official	5	AC 5	limestone	ca. 2,60	ca. 1,20	-	vaulted with rectangular end pieces
wife of Weserkafankh	wife of official	5	AC 5	limestone	-	-	-	vaulted with rectangular end pieces
wife of Djadjaemankh	wife of official	5	AC 7	limestone	-	-	-	vaulted with rectangular end pieces
Ptahshepses	vizier	5	AC 8 (P)	granite	2,95	1,49	1,73	vaulted with rectangular end pieces
Khamerernebty	member of the royal family	5	AC 8 (P)	granite	2,53	1,14	1,24	vaulted with rectangular end pieces

Table 2. List of sarcophagi from Central Abusir.

The third, only partially preserved, is the limestone sarcophagus of prince Werkaura (possible the oldest son of Nyuserra see Krejčí *et al*. 2014, 295–7; see however Vymazalová and Coppens 2013, 123–135, for a different opinion). Only a base of the chest broken in three pieces was found (Krejčí *et al*. 2014, 36, fig. 2.16, pl. 2.8). On the contrary, the limestone sarcophagus found in the mastaba of Nebtyemneferes (for the social rank of its owner and dating of the tomb see Krejčí *et al*. 2008, 34–36) is preserved in one piece up until today with its flat, slightly vaulted lid (Krejčí *et al*. 2008, 27) (Fig. 3).

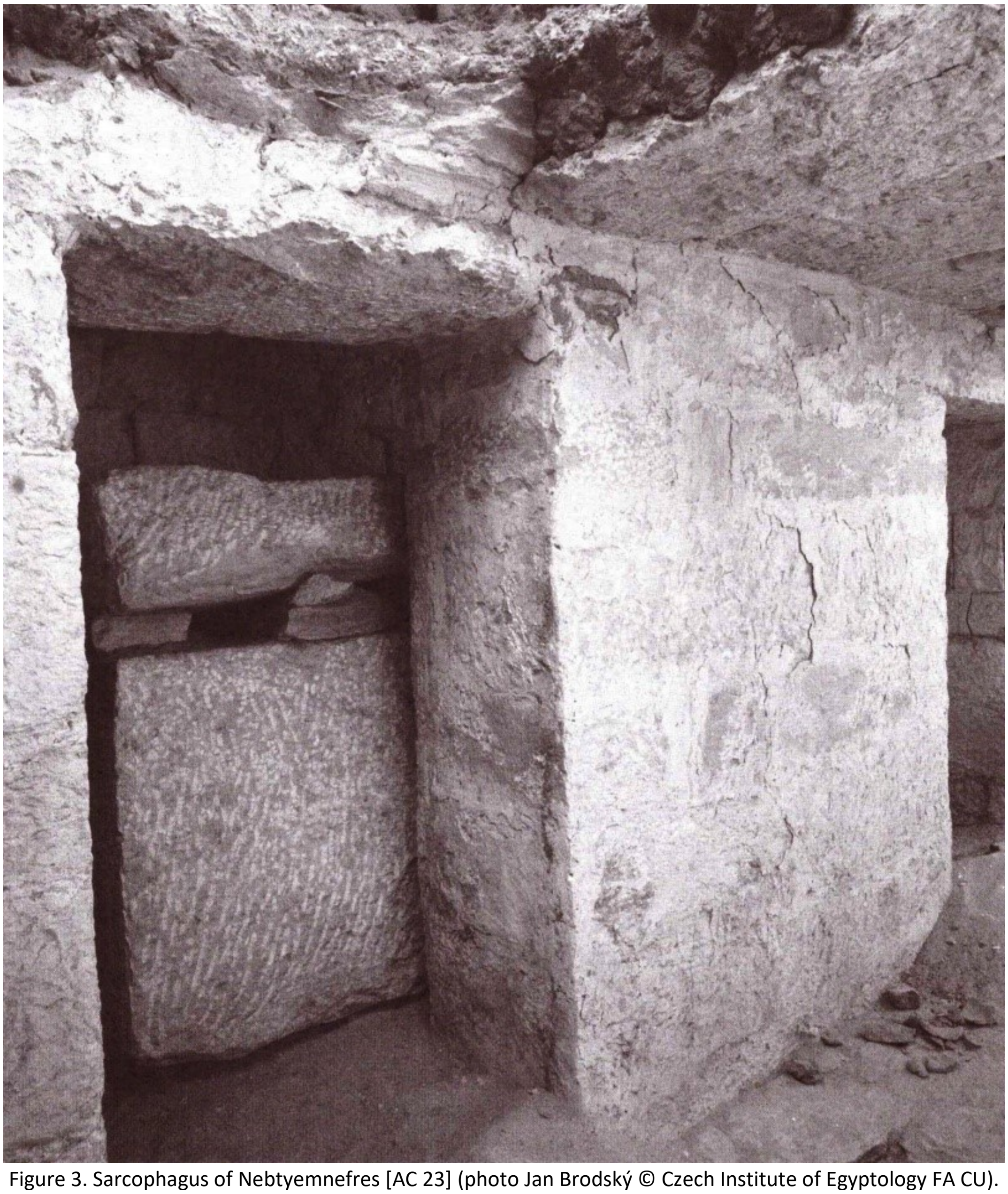

Figure 3. Sarcophagus of Nebtyemnefres [AC 23] (photo Jan Brodský © Czech Institute of Egyptology FA CU).

Recent excavations in Central Abusir brought to light four mastabas situated to the southeast of Raneferef's pyramid complex, all dated to the reign of Nyuserra. In the tombs of prince Nakhtsare (Krejčí *et al*. 2008) and queen Khentkaus III (Krejčí 2015, 28–42) no fragments of sarcophagi were found. In the tombs of prince Kakaibaef (AC 29) (Krejčí 2013, 26–37) and the anonymous mastaba AC 31 the sarcophagi were only partially preserved (Krejčí 2016, 12–23) (Fig. 4). The sarcophagus of Kakaibaef, of which only the lowermost part of the chest survived (similar to the situation in the tomb of prince Werkaura), was manufactured from very hard limestone, probably from the Tura and Maasara quarries, differing with its crystalline structure from the material of the other mentioned examples (personal communication with archaeologist Jaromír Krejčí). In tomb AC 31 only several limestone fragments were discovered, of which one was a part of the rectangular end piece of the vaulted lid with a handle.

Figure 4. Sarcophagus of Kakaibaef [AC 29] (photo Jaromír Krejčí © Czech Institute of Egyptology FA CU).

Sarcophagi of high court officials

The tombs of high officials equipped with sarcophagi are situated to the northeast of the pyramid temple of Nyuserra on the so-called Cemetery of the Nobles (Borchardt 1907). L. Borchardt excavated here three tombs of high officials in the early 1900s, including the tombs of Userkafankh, Djadjaemankh and an anonymous official all dated to the reign of Nyuserra. Each tomb contained limestone sarcophagi of both the owners and their wives in the burial chambers. Unfortunately, Borchardt's publication lacks any detailed information about these sarcophagi. The only data provided informs that the sarcophagi were of limestone, with vaulted lids with rectangular end pieces and containing one or two handles at both shorter ends (Borchardt 1907, 109–126). No precise information about the dimensions of these sarcophagi is provided and one can only estimate on the basis of the published plan that Weserkafankh sarcophagus was the largest one (see Borchardt 1907, pl. 20).

Nyuserra's vizier Ptahshepses built his tomb – one of the largest and most elaborated non-royal tombs dated to the Old Kingdom – to the northeast of the aforementioned tombs of high officials in the Cemetery of the Nobles (Verner 1986; Krejčí 2009). He had himself buried in a sarcophagus made of red granite, sharing the burial chamber with his wife, princess Khamerernebty (Nyuserra's daughter), who was interred in a very similar but smaller sarcophagus of the same material. Khamerernebty was originally intended to be buried in the Tomb of Princesses where a limestone sarcophagus was installed for her, but she was presumably buried in the tomb of her husband in the end (Fig. 5). Women of royal blood were usually buried in their own tombs; for instance Meresankh III (Dows and Simpson 1974) or Iput I (Firth and Gunn 1926). Those who were married to high officials were usually buried separately in the northern shaft of their husbands' tombs, e.g. princess Sheretnebty, (see below) or in a part of the tomb reserved exclusively for them, e.g. Mereruka's wife Waatetkhethor (Kanawati and Abder-Raziq 2010, 18).

Both sarcophagi in Ptahshepses' tomb contained vaulted lids with rectangular end pieces and two handles on both shorter ends. They are finely polished and bear no traces of decoration or inscriptions. The larger of the two was the sarcophagus of Ptahshepses, which in size surpasses the dimensions of the royal sarcophagus of Raneferef (length estimate 2.7 m; see Verner 2000, 574). Interestingly, the interior of the chest walls of both sarcophagi were lined with thick slabs of smooth limestone fastened to the sides by means of a thin layer of white stucco (Verner 2000, 569). This specific type of design that came into use after the middle of the 5th dynasty is also known from Giza and Saqqara (see Jánosi 2011, 205–216) and was perhaps used also for Khentkaus II (see above).

Figure 5. Sarcophagi of the Vizier Ptahshepses and his wife princess Khamerernebty [AC 8 (P)] (photo Kamil Voděra © Czech Institute of Egyptology FA CU).

The tomb of the scribe of the royal children Idu, who was also interred in a limestone sarcophagus, was part of the above mentioned Djedkare's family cemetery (Verner and Callender 2002, 63–69). His is the only inscribed sarcophagus coming from Central Abusir, but its text differs from other inscribed sarcophagi dated to the Old Kingdom (see Donadoni 1969, 92–95). The text on the outer side of the chest consists of five lines containing a date and the name and titles of the owner, Idu. Surprisingly, it is written in hieratic in red ink and oriented upside-down, showing that it was written prior to finishing and installing the sarcophagus in its place (Verner and Callender 2002, 68, pl. XVII, Df5 and fig. D6; Verner 1980, 243–268). The dimensions of Idu's sarcophagus are comparable to that of the anonymous lady L, but its chest was closed by a flat, only slightly vaulted lid, without rectangular end pieces (see Table 2).

The materials used for manufacturing the sarcophagi from Central Abusir and its typology

The choice of the material used for sarcophagi in the royal cemetery at Abusir was probably influenced by the symbolism associated with particular materials (Verner 2000, 561–580), its quality and availability as well as by the demands on production. The recent monograph of British engineer Denys Stock (Stocks 2003) illustrates the enormous differences in techniques of a sarcophagus made in hard stone (granite, basalt or greywacke) and in softer stone (limestone or travertine). Only four or five different types of material were used for sarcophagi during the Old Kingdom: travertine, granite, basalt/greywacke and limestone. Travertine was not used in Abusir. The royal sarcophagus of Sahura was carved of a 'black' stone, as well as the sarcophagi of Userkaf, Menkauhor, Djedkara and Unas – all were made of basalt or greywacke. Black stone – basalt or greywacke – was used for royal sarcophagi since the reign of Menkaura and for royal wives from the time of Pepy I onwards (see Novakova forthcoming). The red granite sarcophagus of Raneferef appears to be the only exception in the 5th dynasty, although the possibility that the sarcophagi of Neferirkara and Nyuserra were also produced in red granite cannot be excluded (see Verner 2000, 571).

The prevailing material used for sarcophagi of the members of the royal family in Abusir, besides the kings, was limestone, but three pieces were produced of red granite: the sarcophagus of queen Khentkaus II, of the anonymous queen from pyramid Lepsius 24 and of Khamerernebty in the tomb of her husband Ptahshepses (see Chart 2). It seems that royal wives or even mothers of future kings had their sarcophagi built of granite as a reflection of their importance (see Verner 2000, 561–580; Callender 2011, 173, 226, 228, 235). Royal daughters and less important wives and sons of the king were usually interred in limestone sarcophagi, as is also the case in Giza and Saqqara (see Janosi 1996), although a few exceptions are known: e.g. Iput I (see Hawass 2000, 413–444; Callender 2011, 208, 223). In Abusir we suppose that the material of princess Khamerernebty's last resting place was probably closely connected with the choice of the same material for her husbands' sarcophagus and with his special social status. Both these sarcophagi were presumably manufactured in the royal workshop, under the supervision of Ptahshepses as holder of the title 'overseer of all royal works' (Verner 2000, 572).

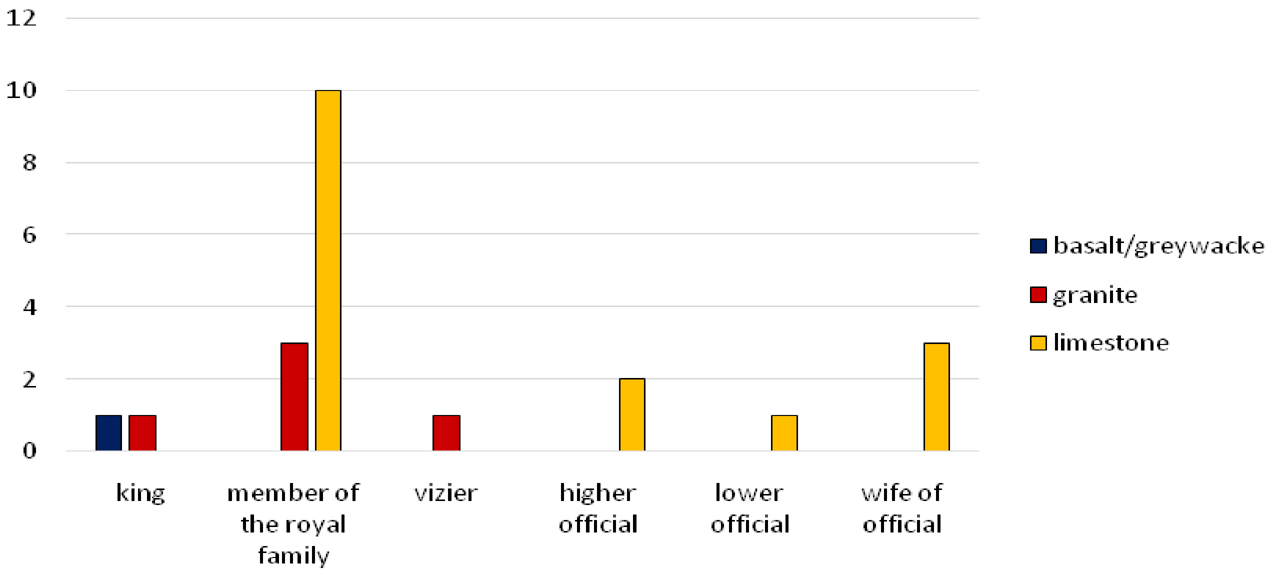

Chart 2. Materials used for sarcophagi from Central Abusir.

Similarly, limestone was used for the sarcophagi of officials and their wives in Abusir. Only the vizier Ptahshepses owned a granite sarcophagus (see chart 2). He belonged to those few who were privileged to be buried in granite sarcophagi in the 5th dynasty probably as a reflection of their special status: except for Ptahshepses, the list includes the viziers Minnefer and Senedjemib Mehi, and five other officials from Giza and Saqqara. The rest of the upper class officials (46 in total) had their sarcophagi in the 5th dynasty carved of limestone (Novakova forthcoming, chart 3).

Typologically, all the sarcophagi from Abusir consists of a rectangular chest (for exceptions see Donadoni 1969, 32– 35), distinguishable themselves by the shape of their lids. It is worth noting that the majority of sarcophagi found in Central Abusir were closed by vaulted lids with rectangular end pieces. The only two exceptions are lids of the scribe of the royal children Idu and Nebtyemneferes, both having slightly vaulted but flat lids without rectangular end pieces.

The non-royal cemetery at Abusir South (Fig. 6)

In Abusir South, a cemetery of important noblemen, officials, and priests from the 3rd to 6th dynasties is situated (see Chart 3). Since the 1990s the Czech mission explored several parts of this cemetery and its finds include 16 sarcophagi, of which nine are installed in tombs dated to the 5th dynasty and seven to the 6th dynasty. For the 6th dynasty, the majority of all known sarcophagi derive from North Saqqara (the Teti pyramid cemetery is strongly represented), followed by South Saqqara, Giza and then Abusir South – (see Table 1).

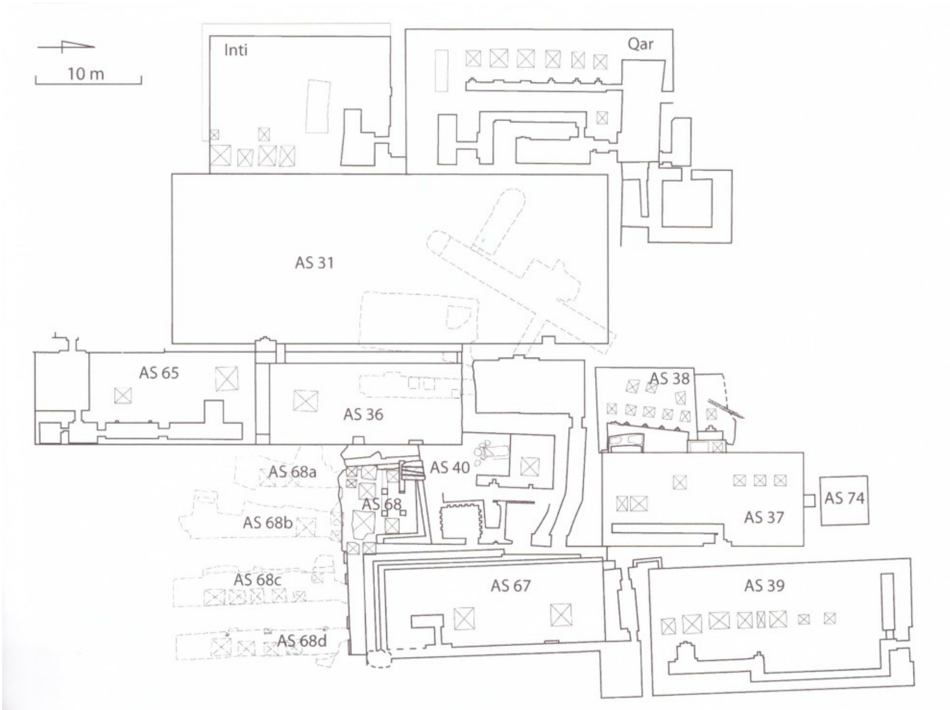

Figure 6. Ground plan of the cemetery in Abusir South (after Bárta 2015: Fig. 1a).

While the tombs in Central Abusir usually contain only one burial chamber for the tomb owner (only exceptionally other burials were included as is the case in the tomb of Khekeretnebty and Ptahshepses), in Abusir South so-called family tombs are much more common. This is a new type of tomb that appeared at the time of Nyuserra (Bárta 2005, 105–130) and contained multiple shafts to accommodate the burials of the members of the owner's family. Sarcophagi were installed especially in three funerary complexes of that type: in the tomb complex of princess Sheretnebty, the tomb compound of vizier Qar and in the tomb of Neferinpu – all including rare examples of intact burials (see below).

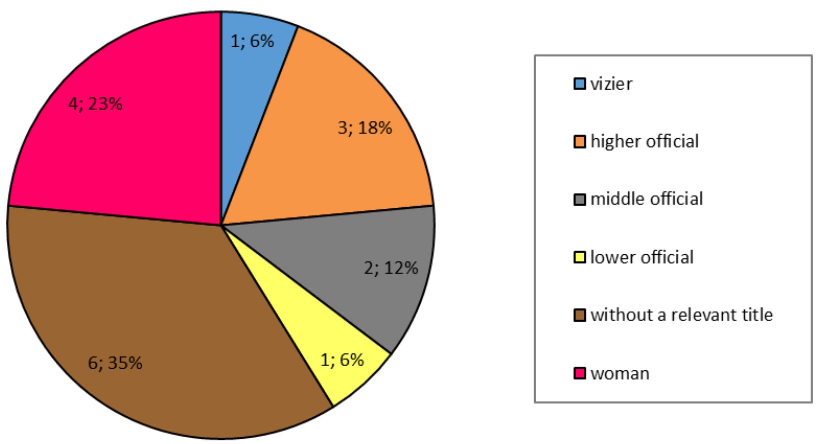

Chart 3. South Abusir – social stratification of sarcophagi's owner.

Tomb complex of princess Sheretnebty

Sheretnebty – a daughter of Nyuserra – is for the time being the only known person of royal blood to have been interred in the Abusir South cemetery (Vymazalová and Dulíková 2013, 32–33). She was buried together with her husband in a rock-cut tomb (AS 68c), which was the largest and most elaborate tomb in this tomb complex containing a pillared courtyard corridor and four rock-cut tombs belonging to high state officials (Vymazalová and Dulíková 2012; Vymazalová and Dulíková 2014; Bárta 2013; Barta 2014).

Surprisingly, her small burial chamber remained largely unfinished and very simple, as it appears that she might have been buried in a hurry following a sudden, unexpected demise. Her body was not placed in a sarcophagus, but directly on the floor on a layer of sand (or possibly laid in a wooden coffin) (Vymazalová 2014, 14; Vymazalová 2015, 43–59) (Fig. 7).

Figure 7. Burial place of princess Sheretnebty [AS 68c] (photo Hana Vymazalová © Czech Institute of Egyptology FA CU).

The burial of her husband, whose name and titles have not been preserved, was in contrast to his wife's burial elaborate and well-equipped (Vymazalová 2015, 43–59). His large limestone sarcophagus with a vaulted lid with rectangular end pieces belongs to the most beautiful examples of its type from Abusir South. Its smoothly manufactured walls reflect the high status of its owner (Fig. 8).

The easternmost rock-cut tomb within Sheretnebty's tomb complex belonged to the official Nefer (AS 68d), who held high offices at court (for his titles, see Bárta *et al*. 2014b, 15–38). He was buried in the southernmost shaft, in a limestone sarcophagus with vaulted lid. The wife of the tomb owner, the priestess of Hathor Neferhathor, was interred in a limestone sarcophagus (in shaft 2) with the same type of lid. The supposed son of the couple buried within the complex was placed solely in an intact burial pit (in shaft 3), but another limestone sarcophagus that was still sealed was discovered in the tomb complex in shaft 4 (Bárta 2014, 17–29). Interestingly, this sarcophagus was slightly larger than the sarcophagus of Nefer himself. A similar situation occurred in the tomb of Neferinpu (see below). The ceramic analysis shows that the burial in shaft 4 is dated at least several decades later than Nefer's own burial – to the time of the 6th dynasty (personal communication Katarína Arias). This fact could explain the difference in the dimensions of both sarcophagi. It has to be noted that there is a clear increase in the size of sarcophagi during the Old Kingdom.

While the average length of a high official's sarcophagus was 2.22m in the 4th dynasty, and 2.41m in the 5th dynasty, it reached almost up to three meters (2.90m) in the 6th dynasty (Nováková forthcoming, Table 1).

Figure 8. Burial place of Sheretnebty's husband [AS 68c] (photo Martin Frouz © Czech Institute of Egyptology FA CU).

Three other shafts in the tomb contained four more burials, most probably the tomb owners' children and other relatives, but none of them included a sarcophagus; the deceased were placed on the floor of the chambers or in a burial pit (Vymazalová 2015, 43–59; Vymazalová and Arias Kytnarová forthcoming).

Tomb of Neferinpu

Another pair of sarcophagi were uncovered in the tomb of the sun priest Neferinpu, dated to reign of Nyuserra and Djedkara (AS 37), which is situated on the north-eastern side of the central mound in Abusir South (Bárta 2011; Bárta 2013; Vymazalová *et al*. 2011; for the titles see Bárta *et al*. 2014a, 89). His mastaba consists of six shafts and burial spaces in the substructure. Neferinpu's limestone sarcophagus (situated in the burial chamber to the east at the bottom of shaft 1) was found undisturbed (Bárta *et al*. 2014a, 36) (Fig. 9), with his flat lid sealed by means of pinkish mortar as in the case of an anonymous sarcophagus from the tomb of Nefer (see above).

The sarcophagus of an anonymous man (found in the chamber to the west at the bottom of shaft 1) was closed with a vaulted lid with rectangular end pieces and furnished with two handles on its shorter ends (Fig. 10). His sarcophagus is slightly bigger than that of Neferinpu (see Table 3). This is rather surprising as it was usually the tomb owner's sarcophagus that was the largest one in the tomb (and often the only one). However, the anthropological analysis of the burials from both sarcophagi revealed that both were males (instead of one being the tomb owner's wife as would be standard practice in a private tomb) and the taller individual was interred in the larger sarcophagus in the western chamber. The height of this individual was estimated as 182 (respectively 186 cm), while Neferinpu was 173 cm (respectively 175 cm) tall (see Havelková in Bárta *et al*. 2014a, 163–177). It is possible that the height of the deceased was the main reason why he had such a large sarcophagus; it is worth mentioning that he was even taller than the inner dimensions of the sarcophagus (1.82 × 0.62 × 0.60m).

Figure 9. Sarcophagus of Neferinpu, shaft 1, chamber East [AC 37] (photo Miroslav Bárta © Czech Institute of Egyptology FA CU).


Figure 10. Anonymous sarcophagus in the tomb of Neferinpu, shaft 1, chamber West [AC 37] (photo Miroslav Bárta © Czech Institute of Egyptology FA CU).

Burials of other members of Neferinpu's family (probably two couples representing two generations) are inferior in nature: the deceased were placed in a burial pit or directly on the floor of the burial niche (Bárta *et al*. 2014a, 206).

Sarcophagus's owner	Social status	Dyn.	Necropolis	Tomb no.	Material	Length of chest (m)	Width of chest (m)	Height of chest+lid (m)	Type of lid
Nefer	higher official	5	Abusir South	AS 68d, shaft 1	limestone	2,25	1,05	1,05	vaulted with rectangular end pieces
Neferhathor	woman	5	Abusir South	AS 68d, shaft 2	limestone	2,25	1,05	0,94	vaulted with rectangular end pieces
anonymous	without a title	6	Abusir South	AS 68d, shaft 4	limestone	2,50	1,10	1,05	vaulted with rectangular end pieces
husband of Sheretnebty	without a title	5	Abusir South	AS 68c, shaft 1	limestone	2,45	1,14	1,11	vaulted with rectangular end pieces
Nefershepes	middle official	5	Abusir South	AS 67, shaft 1	limestone	2,24	1,03	1,02	vaulted with rectangular end pieces
Neferinpu	lower official	5	Abusir South	AS 37, east	limestone	2,40	1,06	1,00	flat
anonymous	without a title	5	Abusir South	AS 37, west	limestone	2,52	1,22	1,24	vaulted with rectangular end pieces
anonymous	without a title	5	Abusir South	AS 47	limestone	2,09	0,70	0,74	vaulted with rectangular end pieces
anonymous	without a title	6	Abusir South	AS 32	limestone	2,30	1,08	-	vaulted with rectangular end pieces
Qar	vizier	6	Abusir South	AS 16	limestone	3,10	1,50	2,02	vaulted with rectangular end pieces
anonymous	woman	6	Abusir South	AS 16, shaft 2	limestone	2,00	0,86	1,25	flat
anonymous	woman	6	Abusir South	AS 16, shaft 5	limestone	2,50	1,02	0,75	flat, slightly vaulted
anonymous	without a title	6	Abusir South	AS 16, shaft 6	limestone	2,70	1,15	1,50	flat
Senedjemib	higher official	6	Abusir South	AS 18	limestone	3,10	1,50	1,76	flat
Pepyankh Inti	middle official	6	Abusir South	AS 16, shaft A	limestone	3,12	1,65	1,96	flat
Inti	higher official	6	Abusir South	AS 22	limestone	3,14	1,70	1,84	flat

Table 3. List of sarcophagi from South Abusir.

Tomb complex of vizier Qar

Another large amount of sarcophagi comes from the tomb complex of vizier Qar, located on the central mound in Abusir South to the west of Neferinpu's mastaba. Vizier Qar belonged to the higher echelons of the court during the reign of Teti (Bárta 2009, 51–53 and 307–311). His large tomb complex had seven shafts in the substructure; four with sarcophagi. Qar had by far the largest sarcophagus exceeding even 3m (3.10m in length), followed size-wise by the anonymous man buried in shaft 6 (2.70m); perhaps his father (according to Bárta 2009, 313), the anonymous older woman in shaft 5 (2.50m) − an intact burial (see Bárta 2014, 77) − and the anonymous female in shaft 2 (2.00m).

Qar's sarcophagus is made of limestone, containing a vaulted lid with rectangular end pieces equipped with two handles on both shorter ends (Fig. 11). It is one of two inscribed sarcophagi from Abusir South. The inscriptions incised with partially preserved black contour lines and blue paint (Bárta 2009, 113) are on the east face of the chest and the lid, as well as on the chest's inner east and west wall. They bear the owner's titles and name; the standard practice on inscribed Old Kingdom sarcophagi since the reign of Khufu (Donadoni 1969, 92). Lids of all three other sarcophagi installed in the tomb compound were, unlike the lid of Qar's sarcophagus, flat. The shape of the lids as well as their sizes (mentioned above) clearly indicate a lower social status compared to Qar's own position. The identity of the owners remains unknown.

Figure 11. Sarcophagus of the Vizier Qar [AS 16] (photo Kamil Voděra © Czech Institute of Egyptology FA CU).

In addition, sarcophagi are attested for some of the sons of vizier Qar. Two, Qar Junior and Senedjemib were interred to the north of their father's burial place, while another son of Qar – apparently the most successful in his career – the judge and priest Inti, was buried in a tomb situated to the south of his father's tomb complex (Bárta and Vachala forthcoming). Senedjemib and Qar Junior, who lived into the reign of Pepi II, were associated with the central administration, held titles connected with juridical offices and were employed in the royal mortuary complexes (for the full titulary of both sons see Bárta 2009, 147–149). Senedjemib was interred in an uninscribed limestone sarcophagus slightly larger than Neferinpu's sarcophagus (see Table 3) (Fig. 12). On the contrary, his brother Qar Junior was buried in a sarcophagus pit – a type of burial often used for persons of apparently inferior status (Fig. 13). The reason for such a solution is not evident, but perhaps the burial had to be performed in haste (Bárta 2009, 301–315).

Figure 12. Sarcophagus of vizier Qar's son Senedjemib [AS 18 (HH)] (photo Kamil Voděra © Czech Institute of Egyptology FA CU).


Figure 13. Sarcophagus of Vizier Qar's son Qar junior [AS 17 (HH)] (photo Kamil Voděra © Czech Institute of Egyptology FA CU).

The tomb of their brother, the judge and priest Inti, contained a limestone sarcophagus that was almost identical in dimensions (see Table 3) with those of his brother Senedjemib and his father Qar (Bárta and Vachala forthcoming). It is of a unique decoration because of the monolithic limestone stela that constitutes an integral part of the east wall of the sarcophagus (Bárta 2005, 183–189) (Fig. 14). It bears a hieroglyphic inscription comprising of offering formulas, a list of offerings and the name and titles of the tomb owner.

According to Miroslav Bárta (2005, 187) Inti's stela could well be a transitional stage in the development leading to decorated wooden coffins including the false door in its interior.


Figure 14. Sarcophagus of Vizier Qar's son judge Inti, shaft J [AS 22 (JJ)] (photo Kamil Voděra ©Czech Institute of Egyptology FA CU).

The tomb of Inti contains several other shafts. Besides the tomb owner, also shaft A (belonging to Pepiankh Inti) accommodates a limestone sarcophagus with a flat type of lid. Its dimensions, exceeding 3m, are comparable to the sarcophagi of Qar, Senedjemib and Inti (Bárta 2004, 59).

Apart from the above mentioned tomb complexes three other sarcophagi found in Abusir South need to be addressed. They were uncovered in the tomb AS 32 (unpublished, preliminary dated to the 6th dynasty), AS 67 (Bárta 2012, 24–43) and AS 47 (unpublished), both latter dating to the 5th dynasty. The anonymous tomb AS 32 is situated to the south-east of the aforementioned tomb complex of the vizier Qar.

Its limestone sarcophagus' lid is that of the vaulted type with rectangular end pieces. Tomb AS 67, which belongs to Nefershepes (an official employed in the sphere of the organisation of labour; for the titles see Bárta 2011, 9–21, Bárta *et al*. 2014b, 15–38) is located to the north-east of the complex of princess Sheretnebty. Its burial chamber was furnished with a limestone sarcophagus with vaulted lid with rectangular end pieces, and with its dimensions almost identical in size to that of Nefer's sarcophagus (see Table 3). The surface treatment is of very high quality, comparable to the sarcophagus of Sheretnebty's husband. The last so-far known sarcophagus from Abusir South was found in the anonymous tomb AS 47, located in another part of the Abusir South cemetery, far to the south-east of the above mentioned examples. It was made of the same material (limestone) and type of lid (vaulted with rectangular end pieces) as the abovementioned pieces, but with quite small dimensions, in length hardly exceeding 2m (2.09m in length).

The materials used for manufacturing the sarcophagi from Abusir South and its typology

In contrast to Central Abusir all sarcophagi found in South Abusir were made of limestone. The choice of material for carving a sarcophagus was closely connected with the social status of its owner (see above). In Abusir South, most individuals buried were associated with the central administration, held priestly titles or titles connected with juridical offices. To the highest-ranking persons belonged most likely the husband of princess Sheretnebty (though no titles are preserved) and the honorary vizier Qar. On other Memphite necropoleis very few non-royal persons had the privilege to be interred in a granite sarcophagus, which probably reflected their special status; the vast majority of the attested officials' sarcophagi, including those belonging to the viziers, were in the 5th dynasty produced of limestone (see Materials used in Central Abusir). It is worth noting that the use of granite markedly decreased during the Old Kingdom (Nováková forthcoming, graph 3–6). In the end, in the 6th dynasty all known officials' sarcophagi were made of limestone. Based on the sarcophagi discovered in the Abusir South cemetery and dated to the 6th dynasty, all of which were made of limestone, this general trend can be confirmed.

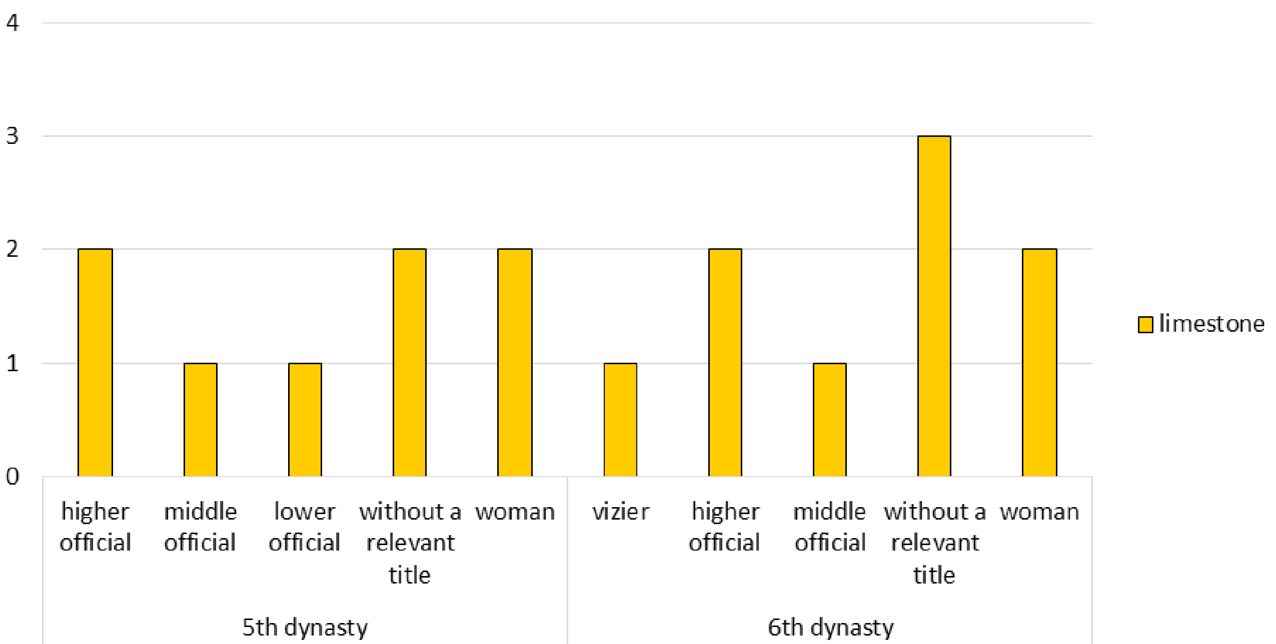

Chart 4. Materials used for sarcophagi from Abusir South.

An interesting insight and possible indication of the material used by the highest state official is found in the well-known biographical text of Weni (Sethe 1915, 98, z. 8 – 110, z. 2.; Strudwick, 2005, 352–357). 'His Majesty sent me to Ibhat especially to bring back the sarcophagus "Chest of the Living" and its lid, ..for the pyramid of Merenra, my mistress… His majesty sent me to Elephantine especially to bring back a granit.e false door and its lintel as well as (other) doors and associated elements of granite ... for the upper chamber of the pyramid of Merenra, my mistress' (Strudwick 2005, 356). Reporting on his journey to Elephantine, Weni did not mention bringing a sarcophagus for himself, only the greywacke sarcophagus from Ibhat for the king. Moreover, he directly asked for a white stone (i.e. limestone) sarcophagus from Tura: 'When I requested from the majesty of my lord that a sarcophagus of white stone of Tura be provided for me, his majesty had the seal-bearer of the god and a boat-crew under his command cross over and bring back this sarcophagus from Tura' (Strudwick 2005, 353). The text illustrates that it was not common, at least in the 6th dynasty, to equip an official's burial (including that of the head of the supreme state office) with a granite sarcophagus. Material used for carving a sarcophagus for a non-royal person was restricted to limestone as the archaeological findings, including from Abusir, document.

From a typological point of view, all chests of the sarcophagi are of a typical rectangular shape, but they significantly differ in the quality of the surface treatment. While the sarcophagi of the husband of princess Sheretnebty, the sarcophagus of Nefershepes, Nefer and the vizier Qar are of a very high quality surface treatment (in first two instances they were very carefully smoothed), the sarcophagi of the members of Qar's family in his tomb complex or even his brothers' (e.g. the sarcophagus of Senedjemib) were very roughly shaped and manufactured. Generally, it can be stated, that sarcophagi dated to the 5th dynasty were better treated than their counterparts dated to the 6th dynasty. The social position of the tomb owner also played an important role. Sarcophagi of viziers and high officials were carved more elaborate and as a rule, the sarcophagus of the tomb owner was of the highest quality in comparison to sarcophagi belonging to other family members.

The lids that covered sarcophagi in Abusir South dated to the 5th dynasty were vaulted with rectangular end pieces. The only exception is the flat lid of Neferinpu's sarcophagus. The use of different types of lids in the two burials within a respective tomb even in the same shaft raises some questions. Neferinpu's lower social standing probably limited him in the choice of the lid, while the use of the vaulted lid in the case of the sarcophagus of the anonymous relative probably reflects his higher social status.
In contrast to 5th dynasty, sarcophagi from Abusir dated to the 6th dynasty were closed by flat lids (with the exception of the vizier Qar) and correspond to their non-royal counterparts from Giza and Saqqara.

Decoration and inscriptions on sarcophagi from Abusir South

Only two inscribed sarcophagi have up until now been discovered in Abusir – the sarcophagus of the vizier Qar and the sarcophagus of Inti. Typical information consist of the name and titles of the tomb owner and the offering formulas are incised (or in the case of Inti's sarcophagus painted) on both the outer and inner walls of the sarcophagi. Moreover, the latter sarcophagus is decorated with a large monolithic stela attached to its east face and it contains also a list of offerings.

The comparison with sarcophagi belonging to other viziers dated to the reign of Teti and located at the Teti pyramid cemetery is of certain interest, although one has to keep in mind that Qar was only a honorary vizier, so his status was most likely lower than that of a 'real' vizier (see Bárta 2009, 147–152 and 307–311). Similar to Qar's last resting place, all sarcophagi of Teti's viziers are very large, measuring at least 3m in length (Mereruka's sarcophagus even 4.5m), with their lids, in contrast to Qar's sarcophagus, always flat. Several sarcophagi are decorated (e.g. with the palace-façade, *wḏ3t* eyes or the seven sacred oils; for different motives on sarcophagi see Donadoni 1969, 76–93) and all of them bear inscriptions; mostly the owner's name and titles. In addition, one encounters on the sarcophagi of Ankhmahor (Firth and Gunn 1926, pl. 58, n.1–3; Kanawati and Abder-Raziq 1998, pls. 29, 69, 70), Khentika Ikhekhi (James 1953, 16–19) and Kaaper (another high official dated to Teti's reign; Kanawati and Hassan 1996, 43, 48–49) a very specific type of text. The text is addressed to those who are in charge of the necropolis, who are asked specifically to put the sarcophagus' lid in the proper manner on its chest (Strudwick 2005, 424–425). This seems to be a popular formula during the reign of Teti as no similar text occurs in any of the other necropoleis including Abusir.

Conclusion

The corpus of the sarcophagi discovered in Abusir contains almost 40 examples, which constitutes the third largest amount dated to the Old Kingdom following the finds from the Giza and Saqqara necropoleis. Each of the two distant cemeteries - Central Abusir and Abusir South - is characterized by its particularities. A great difference in the social stratification of the sarcophagus owner can be observed between both sites. In Central Abusir important court officials, and primarily the members of the 5th dynasty royal family, were buried, while in Abusir South the social status of the sarcophagus' owners was more diverse, ranging from lower-class priestly officials up to high judicial officials, dated to both the 5th and 6th dynasties. The so-called family tombs from Abusir South provide evidence of different burial practises in use for particular members of the high-ranking families and family descendants as well as diachronic differences between the families buried on site.

Most often, a noticeable difference between the burial of the tomb owner and the burials of the other individuals within his tomb is discernible. The family tombs show that sarcophagi were installed mostly in the burial chambers of the tomb owners. Often only the owner himself had a sarcophagus (e.g. in the tomb of Sheretnebty), but in some cases also the tomb owner's wife or another relative had burial place furnished with a sarcophagus (e.g. in the tombs of Nefer, Neferinpu and Qar). In such cases, the tomb owner's sarcophagus is usually the largest, which is clearly reflected in the burial installations in Qar's tomb compound. It has to be mentioned that besides the burials with a sarcophagus, the other burials in the same tombs were much simpler. For instance, in the tomb complex of princess Sheretnebty, where more than 30 people were buried (Vymazalová 2015) only a few of the most important owners were interred in a sarcophagus (Nefer, his wife and another relative, and Sheretnebty's husband). A simpler version (a built-up sarcophagus) was used by the owners of the two other rock-cut tomb within this tomb complex, Duaptah and Shepespuptah (see Vymazalová 2015; Vymazalová and Havelková 2016). Other individuals buried in the tombs as well as in the shafts in the courtyard and the corridor of the tomb complex were interred in burial pits or directly on the floor of their burial chambers (Bárta *et al*. 2014b; Vymazalová 2015).

Furthermore, tombs from both parts of the site dated to the same period (5th dynasty) allow a comparison of various types of burial places in use for different social strata, which is primarily reflected in the use of different materials for the sarcophagus manufacture. In Central Abusir the wider range of materials in use can be monitored – except for the sarcophagus of Sahura which was made of basalt or greywacke, granite and limestone sarcophagi were installed in the burial chambers. Granite was almost exclusive in use for the members of the royal family, especially royal wives and royal mothers (Khentkaus II, the anonymous queen in tomb Lepsius 24). The only non-royal person – the vizier Ptahshepses together with his wife, princess Khamerernebty furnished his burial chamber with sarcophagi carved from this hard stone. The choice of the material reflects probably Ptahshepses' unique social position as he was one of the first officials of non-royal origin to marriage a king's daughter, and moreover it might have been influenced by his supervision of the royal workshop as the holder of the title 'overseer of all royal works'. In contrast, all the sarcophagi found at Abusir South were made of limestone, including the one of the vizier Qar. This corresponds to a general trend in using materials for the sarcophagi's manufacture over the course of the Old Kingdom: in the 6th dynasty all officials' sarcophagi were carved of limestone, while more examples of granite sarcophagi, which belonged to non-royal persons, are attested from the preceding 5th dynasty (8 pieces of 66; see Novakova forthcoming*,* graphs 3–7).

In the Abusir corpus we can notice – except for the decreasing use of granite – the increase of dimensions of the sarcophagi from the 5th to the 6th dynasty. For instance, the comparison between the sarcophagus of Neferinpu and Qar's sons: Senedjemib and Qar Junior, who executed roughly the same offices as Neferinpu but several decades later (Bárta *et al*. 2014a, 213), is of importance. The length of 5th dynasty officials' sarcophagi range between 2–2.50m, while the length of sarcophagi dated to the 6th dynasty reach over 3m. The dimensions of the sarcophagi – together with the size of the cult chapels, shafts depths, and the size of the burial chambers – are one of several indicators of the social status of their owners (Bárta *et al*. 2009, 311–313). It is symptomatic that the king, important members of the royal family (e.g. Khekeretnebty – the crucial person in Djedkara's family cemetery), viziers (Ptahshepses, Qar) and important high officials (e.g. Senedjemib, Inti) have by far the largest sarcophagi. On the other hand sarcophagi of the lower-strata officials (e.g. Neferinpu, anonymous owner of AS 47) and less important family members show low values (in the case of Qar's tomb compound the sarcophagi of Qar's relatives are about 0.40–1.00m shorter than Qar's sarcophagus).

The sarcophagus surface treatment provides more evidence of the respective social standing of its owner. The best treated are the polished sarcophagi of king Raneferef, Nyuserra's family members (Khentkaus II and Khamerernebty) and vizier Ptahshepses, together with the finely smoothed sarcophagi of the husband of princess Sheretnebty and Nefershepes (an official employed in the sphere of the organization of labour), all of them dated to the 5th dynasty. Probably in connection with the economisation of burials at the end of the Old Kingdom, the prevailing material in use for sarcophagus manufacture in the 6th dynasty – limestone – was most often rather smoothed (e.g. Qar's sarcophagus) or only roughly treated (e.g. sarcophagus of Senedjemib).

It is worth mentioning that the types of sarcophagi attested in Abusir belong to the types with flat lids and vaulted lids, while the lid with a cavetto cornice is not attested at the site until now. A clearly visible distinction in typology can be observed between sarcophagi dated to the 5th dynasty (both from Central Abusir and Abusir South), which were for the vast majority closed by vaulted lids with rectangular end pieces, and sarcophagi dated to the 6th dynasty covered, with exception of Qar's sarcophagus, with flat lids. However, it has to be noted that the choice for different types of lids is not obvious. It seems that vaulted lids were popular throughout all layers of society during the 5th dynasty (in contrast to the 4th dynasty, in which the occurrence of flat and vaulted lids is almost equal in number; see Novakova forthcoming), while its use significantly decreased in the 6th dynasty, during which the flat lids prevailed. However, it is worth mentioning that the vaulted lid with rectangular end pieces was almost the only type used for royal burials during the 5th and 6th dynasties, and therefore it must have been considered a prominent type.

Sarcophagi from Abusir are rarely inscribed and, with the exception of Inti's sarcophagus undecorated (see above). The inscription on the sarcophagus of Idu - the only inscribed sarcophagus, coming from Central Abusir–is far from typical. Written in hieratic and oriented upside-down, it can only be a draft of the inscription intended to be carved on the chest or lid. Two inscribed sarcophagi from South Abusir (of the vizier Qar and the judge Inti) record standard information consisting of the name and titles of the tomb owner, offering formulas, and furthermore, in the case of Inti's stela, a list of offerings.

In addition, the Abusir corpus of sarcophagi not only provides us with three intact examples with the original sealing still in situ, but it also contains unique examples that can widen our knowledge of Old Kingdom burial practices. These include above all Inti's sarcophagus with a limestone monolithic stela attached to it, resembling the wooden coffins dated to the First Intermediate Period, or the two sarcophagi in a single burial chamber in the tomb of vizier Ptahshepses, so far unparalleled.

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Coffin Texts spell 246:
A description of the moon in conjunction with the sun

Gyula Priskin

Introduction

From the New Kingdom onwards the role of the moon, through its increasing association with Osiris, became more emphatic in the ideas about the afterlife and resurrection in ancient Egypt (Derchain 1962, 45–6; Herbin 1982, 237; Koemoth 1996, 203; Kaper 2001, 482). Possibly one of the earliest signs of this growing importance is a curious scene in Hatshepsut's temple at Deir el-Bahari, foreshadowing later similar reliefs in a number of mammisi temples, where Anubis – with his familiarly depicted poise – leans over not the reclining body of Osiris, but instead the disc of the moon (Ritner 1985). Also, in some New Kingdom versions of the Book of Going Forth by Day the deceased already assumed the identity of the moon (see the papyrus of Ani, Faulkner 1994, pl. 18). By Ptolemaic and Roman times, Osiris was frequently equated with the moon, both in writing and iconography (Derchain 1962, 46; Griffiths 1976; Koemoth 1996), and thus the link between the lunar world and the netherworld – i.e. between the perpetually renewing nature of the moon and resurrection in the next life – was widely propagated.

The earliest collections of mortuary spells seem to present a somewhat different picture. The Pyramid Texts are dominated by the notions of stellar and solar rebirth, that is concepts connected with the stars, especially the circumpolar ones, and the sun (Krauss 1997, 1–13; Allen 2012, 62). However, the moon is not entirely absent even in these spells, and it was perhaps most characteristically seen as a heavenly ferryman who transported the deceased's soul from one region of the sky to another one (Krauss 1997, 31–34). The two regions were separated by the ecliptic band where – roughly speaking – the moon, likewise to the sun, travelled through the sky (Krauss 1997, 67–79). The association of the moon with the frequent crossing of celestial waters probably stemmed from its complex movements: besides its conspicuous wandering towards the east each night, and its shift from the west to the east along its cycle, it also oscillated between its apparent northernmost and southernmost orbits with a monthly recurrence.

Though at first the moon did not make it to the forefront of ideas about life after death, it is nevertheless clear that to a lesser or greater extent it features in all major text corpora of ancient Egyptian mortuary literature (Kaper 2001, 481). As for the Coffin Texts, I have recently argued that a well-defined group of spells (154–160) form a composition that, cloaked in the language of mythological allusions, describes the events of the lunar cycle as they unfold in a chronological order throughout the month (Priskin 2016a). In this composition (the Book of the Moon), the short period when the moon is not visible in the sky for one or two days is mentioned or alluded to several times. It must be borne in mind that for the ancient Egyptians this occasion was far more important than for peoples using other calendars in the Middle East or the modern West, because they started their lunar month not with the sighting of the first waxing crescent in the evening, but on the morning when the last crescent of the waning moon was no longer visible just before sunrise over the eastern horizon (Parker 1950, 9–10; Kaper 2001, 481; Krauss 2006, 387–8). The moon becomes invisible at this time because it – from the perspective of an earthbound observer – is situated so close to the sun (i.e. before it) that no light is reflected from its surface towards the earth, and it is completely lost in the glare of sunlight. Astronomers call it conjunction when the sun, moon, and earth are in alignment. In addition to its practical significance, the moment of conjunction (in broader terms, the period that elapses from the disappearance of the last crescent of the waning moon to the appearance of the first crescent of the waxing one) was later intertwined on the mythological level with divine conception, for example that of Khonsu or the child Horus (Derchain 1962, 43; Priskin 2015, 142–4; though conception in general was also closely associated with the full moon, see Smith 2002, 125). In the Book of the Moon itself Coffin Texts spell 155 is entirely devoted to the description of the bas connected with lunar invisibility (*psḏn.tjw*; Priskin 2013).

What is more relevant for the present discussion is the fact that in spells 154 and 160 the invisible moon appears in the disguise of a serpent that is called He-who-is-in-his-fire (*Jm.j-whm=f*; CT II 276a; 379a). In spell 154 this serpent, as the enemy of the sun god, Re, is responsible for the reduction of the month (possibly referring to the fact that observational months are sometimes one day shorter than the uniform 30-day month of the Egyptian civil calendar), whereas in spell 160 it makes the sun god's barque stop momentarily in what is most probably the oldest description of a solar eclipse (Priskin 2015, 104; 109–10). The serpent's name – He-who-is-in-his-fire – is quite telling, insofar as it vividly reflects the recognition that at the time of conjunction the moon dwells in the immediate vicinity of the 'great ball of fire' in the sky, that is the sun.

The same event, the passing of the moon in front of the sun, seems to be described also by Coffin Texts spell 246, as its title reads 'Spell for entering into fire and coming out of fire in the back of the sky' (*r n ꜥq m sḏ.t pr.t m sḏ.t r-ḥꜣ p.t*; CT III 337a). Indeed, the lunar character of the text has been noted by Pierre Barguet (1986, 528–9), and also by Bernard Arquier (2013, 113; 304) who pointed out its possible association with the invisibility of the moon, too. The impression about the intended purpose of the text is strengthened by further references to the blacked-out moon in the body of the spell that is written in the first person singular, as if the speaker was the moon itself. To highlight these lunar allusions and aspects of the text, which are on the whole not overly apparent in the existing translations (Faulkner 1973, 192; Barguet 1986, 528–9; Carrier 2004, 599), in this paper I offer a new rendering of spell 246 into English with detailed commentary.

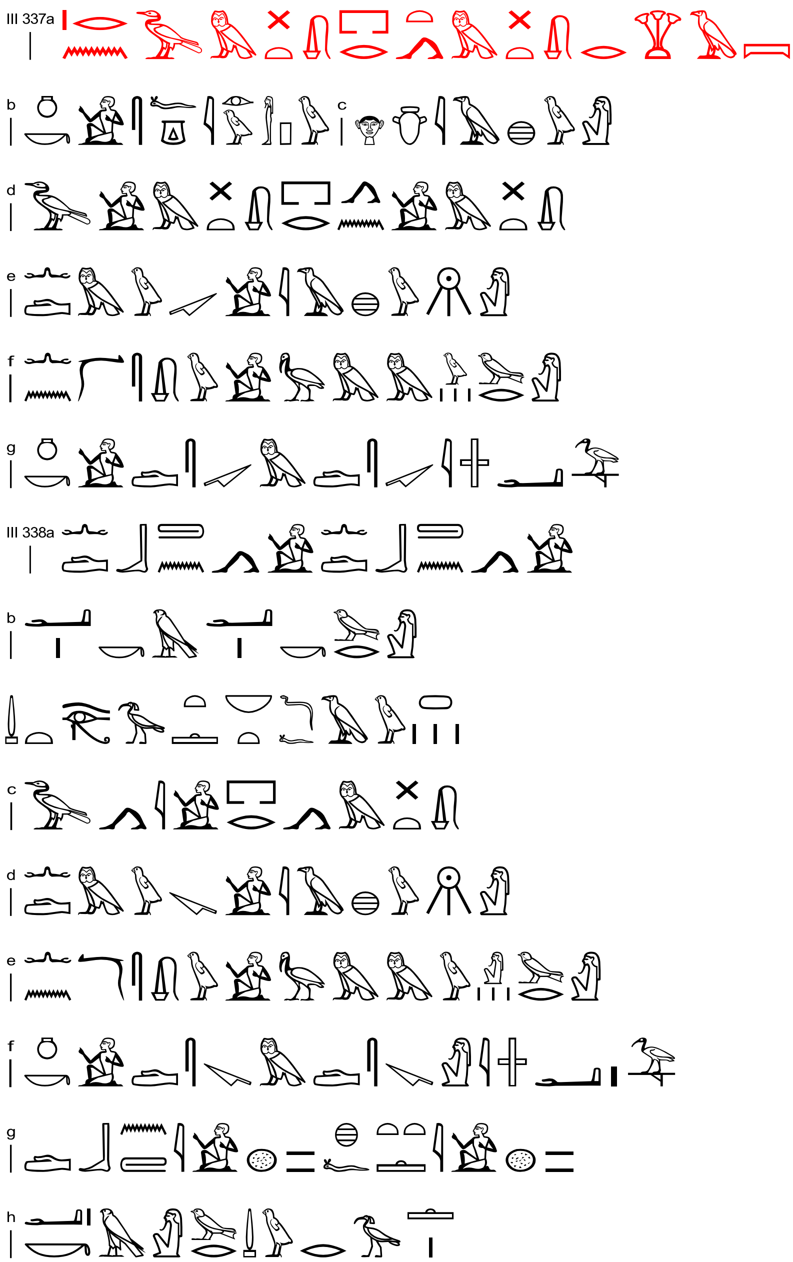
Before doing so, however, I need to say a few more general words about the texts I am going to investigate. Spell 246 has come down to us on three coffins that all originate from the seat of the 13th Upper Egyptian nome, Asyut. Two versions are recorded on the inner and outer coffins of Mesehti (CG 28118 and CG 28119; S1C and S2C according to the sigla in CT), the governor of the area at the end of the 11th dynasty (Kahl 2007, 82–3; Arquier 2013, 24). A third, very fragmentary text is written on the coffin of Iti-ibi (JE 36444; S3C), which was originally made for the man indicated by this name (a local official), but which most probably was used for the interment of a woman belonging to his family (Zitman 2010, 204). The fact that spell 246 is exclusively found on coffins coming from Asyut is not without significance. Whereas earlier I argued that Coffin Texts spells with pronounced lunar content were most likely to be devised in Hermopolis, the main cult centre of the pre-eminent lunar deity, Thoth (Priskin 2016a, 102–3), we should not forget about two things in this respect. First, because Asyut is relatively close to Hermopolis, there were some clear ideological connections between the two places (Gestermann 2008, 213–4), as is evidenced by the interchange of Coffin Texts spells that are only found at the two locations (see spells 154–160, for that matter). Secondly, the people responsible for selecting or composing the spells on the Asyut coffins were also without doubt very much interested in celestial events, either actually watching them or copying – possibly stylised – records of earlier observations for their religious significance. We may infer this because it is these coffins that – alongside with a few specimens found elsewhere – first preserved in a tabular form the list of decans, that is the diagonally arranged names of those stars that helped to keep track of the night hours in ancient Egypt (Kahl 1999, 197–205; Arquier 2013, 78–9; Symons 2014, 93). In the light of all this, it is then not surprising that we should come across a description of lunisolar conjunction in a spell that is solely attested on coffins from Asyut.

Just as with the seven spells of the Book of the Moon, for the contents of spell 246 the topics of the neighbouring spells may offer some guidance, though such an outstanding *leitmotif* as in the case of that composition cannot really be found. It is noteworthy, however, that on the two coffins of Mesehti a hymn to the morning sun, Khepri (spell 245), precedes spell 246; as explained above, it is precisely the proximity of the moon to the rising sun that results in its temporary disappearance from the sky. The following spell on Mesehti's coffins (247) is a logical sequel to spell 246, as its title reads 'Coming out of fire behind the great god' (*pr.t m sḏ.t ḥꜣ nṯr ꜥꜣ*; CT III 339a), and it mentions Thoth and the Eye of Horus. Furthermore, a reference to the mansion of the moon is also included in the text (CT III 339e; Faulkner 1973, 193; Barguet 1986, 529; Carrier 2004, 599), creating a clear-cut connection with lunar phenomena. Though their content seems to be more cryptic, the next two spells (248–249; CT III 340c–4i) are also rife with lunar themes (especially spell 249 with its references to Thoth and the completion of the Eye of Horus). All these five texts belong to a more extended series of spells (243–254) that accompany the depiction of a granary at the foot end of the coffins (Arquier 2013, 110). The immediate context is less clear in the case of Iti-ibi's coffin.

There, on the head end of the coffin, spell 246 is grouped together with spells 252 and 253 (Arquier 2013, 110) that, according to their titles, assist the deceased in becoming Re-Atum and the scribe of this deity, respectively. Since the role of the divine scribe is usually fulfilled by Thoth (Stadler 2009, 25), at least spell 253 can be seen as somehow connected with lunar ideas.

Finally, a few remarks about the presentation of spell 246 in this paper. The text is best preserved on the inner coffin of Mesehti, so I give the hieroglyphic transcription following this source, as it has been published by Adriaan de Buck (CT III 337a–8h, S1C), noting meaningful variants and orthographic peculiarities. Arquier (2013, 304) states that some parts of the spell were deliberately omitted on Mesehti's outer coffin (see also my notes in the commentary; the same phrases are left out on Iti-ibi's coffin as well). Even if it is so, it is clear that the text was at some point – perhaps originally – construed in its longer version, and it seems advisable for the analysis of the spell to use this more verbose variant as the starting point.

Hieroglyphic text



Notes on the hieroglyphic text

III 337b: S2C has ; III 337e: the determinative (knife) is misplaced, the text should read   (Faulkner 1973, 192); III 337g: S2C has , compare III 338f; III 338b: the quail is missing from ; III 338g: the verb phrases are written parallel in a split column in the original text; S2C has in a single column , the duplicated water sign being possibly a scribal error; III 338h: is a variant for (Molen 2000, 817), but the eye is omitted here.

Transliteration and translation

r n ʿq m sḏ.t pr.t m sḏ.t r-ḥꜣ p.t
jnk Sfg-jr.w pw ḥr.j-jb jꜣẖ.w
ʿq=j m sḏ.t prj.n=j m sḏ.t
n dm (w)j jꜣẖ.w
n ns wj Gmm.w-wr
jnk ds mds jm.j ʿ Ḏḥw.tj
n dbn=j n dbn=j
ʿ=k Ḥr.w ʿ=k wr
wḏꜣ.t ꜣẖ.t nb ḏfꜣ.w
ʿq=j prj(=j) m sḏ.t
n dm (w)j jꜣẖ.w
n ns wj Gmm.w-wr
jnk ds mds jm.j ʿ Ḏḥw.tj
dbn=j ẖft.t=j sp sn
ʿ=k Ḥr.w wr
wḏꜣ.t r ꜣẖ

Spell for entering into fire and coming out of fire in the back of the sky.[a]
I am He-with-hidden-form amidst sunshine,[b]
I enter into fire and come out of fire,
the sunshine has not pierced me,
He-who-is-always-found-great[c] has not burnt me.
I am the flint-knife and the flint-sickle that are in the hand of Thoth.[d]
I have not gone around, I have not gone around
your arm, Horus, your arm, the Great One,[e]
and the Sound Eye is radiant and has provisions.[f]
I enter into fire and come out of fire,[g]
the sunshine has not pierced me,
He-who-is-always-found-great has not burnt me.
I am the flint-knife and the flint-sickle that are in the hand of Thoth.
I will go around (twice), I will oppose[h] (twice)
your arm, Horus and the Great One;
the Sound Eye is to be radiant.

Commentary

(a) The speaker claims to enter and leave the ‘fire in the back of the sky’, and this definition can hardly apply to anything else than the sun. Its association with fire is self-evident (Wilkinson 1992, 161), and various passages within the Coffin Texts also underline this identification (Hornung 1999, 11). One obvious example is spell 1033 which states that the fire that is bright or burning towards the deceased is around Re (*sḏ.t tw wbẖ.t r=ṯn ḥꜣ.t Rʿ*; CT VII 263a; Faulkner 1973, 129–30). The assertion that the fire is in the sky may also help to separate this particular fire (i.e. the sun) from other fires that prominently feature in Egyptian mortuary texts. These fires correspond to different regions of the netherworld, such as the Lake of Fire (*š n sḏ.t*), which also appears in the Coffin Texts (CT IV 314a; VII 306d and 508e), and which – especially according to later sources – is a location where the judgement of the dead takes place: the damned are eternally burnt by it, while the righteous receive nourishment from it (Grieshammer 1977b, 259–60; Taylor 2010, 217). Another place of relevance is designated the Island of Fire (*jw n nsrsr*; for a list of attestations in the Coffin Texts, see Grieshammer 1977a, 258 n. 2), and it has more to do with the idea of rebirth and regeneration (Grieshammer 1977a). Though these regions are found in the netherworld, since the deceased’s journey through it is essentially a celestial voyage and is closely associated with the sun's path across the sky, they are just other manifestations of the inherent fiery nature of our closest star. Indeed, the connection of these regions of fire with the sun or the sun god is often emphasised. In one of the well-known vignettes of the Book of Going Forth by Day the Lake of Fire is surrounded by four baboons, and in the corresponding text (spell 126) these creatures are said to sit in the barque of Re (Taylor 2010, 216–7 fig. 68). The Island of Fire, which later became associated with the Hermopolitan creation myth and sacred landscape (Wilson 1997, 47), is located on the eastern horizon, so it is basically the area where the sun god rises daily and where he fights and punishes his adversaries (CT IV 110f–h; Grieshammer 1977a, 258; Minas-Nerpel 2006, 73). Therefore, these associations also reinforce the obvious equivalence of Re with fire.

(b)There is some uncertainty about the exact meaning of the word *sfg* (Grieshammer 1970, 83), and consequently the expression *Sfg-jr.w* should be handled with some caution (see the translation 'Der mit verborgener (?) Gestalt' in Leitz 2002b, 305). However, most researchers accept that the semantic range of *sfg* encompasses the idea of hiddenness and translate *Sfg-jr.w* as 'der mit geheimer Gestalt', 'der mit verborgener Gestalt', 'invisible of shape', 'the one hidden of figures', 'the Hidden-of-Forms', 'Celui-dont-l'aspect-est-caché', 'Mysterious of Form' (Grieshammer 1970, 83, with references; Barguet 1986, 528; Allen 2005, 143; though the expression 'Der mit entblösster Gestalt' has also been proposed, Grieshammer 1970, 85), and this interpretation of course complies well with my understanding of spell 246 as a description of the invisible moon passing in front of the sun. In our text He-with-hidden-form is said to dwell in the midst of sunshine (*ḥr.j-jb j3ḫ.w*), and the same collocation appears at the end of Coffin Texts spell 75: 'I am the god He-with-hidden-form who is within sunshine' (*jnk nṯr Sfg-jr.w jw=j m-ḏr j3ḫ.w*; CT I 405b–c). The text earlier also states that He-with-hidden-form is the ba of Shu (*jnk b3 Šw Sfg-jr.w*; CT I 316b). Since Shu was the god of air and light, substances that are invisible and can only be felt through their effects, the wind and the rays of the sun (Altenmüller 1975, 209), the association of *Sfg-jr.w* with Shu adds to the validity of the conviction that the verb *sfg* connotes the idea of concealment or invisibility, and that the whole expression indeed refers to an entity that is hidden and not seen.

It must also be noted that He-with-hidden-form, again described as in the midst of sunshine (*ḥr.j-jb j3ḫ.w*), already features in the Pyramid Texts in a lunar context. In utterance 493, which otherwise is concerned mostly with the provision of sustenance to the deceased, we can read: 'air is in my nose, semen is in my penis like He-with-hidden-form amidst sunshine' (*ṯ3w m fnḏ=j mtw.t m ḥnn=j mj Sfg-jr.w ḥr.j-jb j3ḫ.w*; PT §§1061e–f). These lines seem to emphasise the invisibility of air and semen making a comparison with He-with-hidden form. After a few phrases with many lacunae, the speaker also asserts that 'the Sixth-Day feast in Kheraha belongs to me' (*nnk snw.t m Ḫr.j-ˁḥ3*; PT §1062c). Since Kheraha, 'the battlefield', is a Heliopolitan location (Yoyotte 1954, 114–5, and in the local tradition there the sixth day of the lunar month (*snw.t*) was associated with the full moon (Smith 2002, 122), we possibly see here a reference to both the invisible and the full moon. Another allusion to the moon in the utterance is perhaps the mention of a being called He-whose-hair-is-parted (*Wp-šn.wj*; PT §1061a), because other passages in the Pyramid Texts intimate that the Egyptians conceived of the moon as a bald head at its time of fullness, and as a head fully covered by hair at its time of invisibility (Derchain 1962, 20; Eaton 2011, 236; Priskin 2016a, 103). Though this text cannot be discussed here in more detail, it should nevertheless be mentioned that some later sources seem to attest to the beneficial influence of the moon on the inundation and the growth of plants (Smith 2002, 126). Consequently, the general topic of utterance 493 should perhaps be understood along the same lines, and that is why lunar references are also included in its discourse (though in its descendant, Coffin Texts spell 180, these are restricted to the mention of He-whose-hair-is-parted, CT III 73e, B2L).

(c) The expression *Gmm.w-wr* is usually rendered 'those who find the Great One' or its equivalent (Faulkner 1973, 192; Leitz 2002b, 305; Carrier 2004, 599; Yoo 2012, 136), and this translation seems to be supported by the plural strokes after *gmm.w*. However, I believe the phrase may be a false plural, that resulted from the misconception of the final *w* in the word, and *Gmm.w-wr* may be understood as a construction with a passive imperfective participle, so it conveys the idea that someone or something is repeatedly found great, or repeatedly found as the Great One (i.e. in the condition of being large), hence my translation 'He-who-is-always-found-great'. In my interpretation the name describes the sun, because its disc – as opposed to that of the moon – can be observed as being full every day when it is close to the horizons during the early morning and late afternoon hours. This meaning of the expression is also suggested by the thought couplet with the previous line: 'the sunshine has not pierced me, / He-who-is-always-found-great has not burnt me'. Obviously, as 'He-who-is-always-found-great' appears parallel with the word 'sunshine', it most likely also designates the sun. It must be noted that I share Barguet's (1986, 528–9) conviction about the grammatical make-up of *Gmm.w-wr*, since he translates it as 'Celui-qui-est-retrouvé (à nouveau)-Grand'. However, he believes it to refer to the moon (Barguet 1986, 529 n. 173; his claim, as referring to the full moon, being accepted by Arquier 2013, 304), but for the reasons outlined above I doubt that his interpretation is correct on this point.

While deciphering *Gmm.w-wr* as a passive structure is certainly a possibility, it must be admitted that the translation 'those who find the Great One' cannot be immediately discarded. Even in this case, however, the expression may point to the invisible moon, because the moon, described as the Great One, appears in a context that is really suggestive of the time of conjunction. In spell 176 of the Coffin Texts we read: 'May the god come in peace, say those who are in the moon, the Great One; they have given me glorious appearances together with Re' (*jj nṯr m ḥtp jn=sn jmj.w jꜥḥ wr rdj.n=sn n=j ḫꜥ.w ḥnꜥ Rꜥ*; CT III 62f–h).

Although it is tempting to see *jꜥḥ wr* ('the great moon' or 'the moon, the Great One') as a reference to the full moon (cf. Faulkner 1973, 151; Barguet 1986, 382; Carrier 2004, 437), the statement that the beings in the great moon are involved in luminous risings not *like* Re but *with* Re strongly implicates that the passage is concerned with the time when the moon is in conjunction with the sun (the word *ḫꜥ* connotes the rising of the sun in the east, see Wilson 1997, 708). This impression is further strengthened by the closing line (rubric) of the spell which describes its purpose as: 'To go forth to the sky, to the place where Re is' (*pr.t r p.t r bw ntj Rꜥ jm*; CT III 62i). Therefore spell 176 seems to associate 'those who are in the moon, the Great One' with the time of lunar invisibility, and possibly it is the same 'Great One' that is encountered in the expression *Gmm.w-wr* 'those who find the Great One'. In this interpretational framework 'the moon, the Great One' does not describe the physical greatness of the lunar disc, but rather the fact that the blacked-out moon represents a distinguished phase in the lunar cycle. Howsoever it was the case, whether *Gmm.w-wr* meant 'He-who-is-always-found-great' or 'those who repeatedly find the Great One (the moon)', it certainly referred to the sun and the moon merged into one as the brilliant solar disc on the eastern horizon.

(d)The majority of translators take *mds* in the sentence *jnk ds mds jm.j ꜥ Ḏḥw.tj* for a participle and translate it as 'I am (or mine is) the knife that cuts what is in the hand of Thoth', or something similar (Faulkner 1973, 192; Barguet 1986, 529; Carrier 2004, 599). While of course this rendering is worth contemplating and cannot be ruled out, Sung Hwan Yoo (2012, 136) has recently proposed an alternative translation which is based on the assumption that *ds* and *mds* are two noun phrases that describe two different types of knife: 'I am the flint-knife and the bronze-knife in the hand of Thoth'. Given that, *ds* is also one of the general words for flint (Graves-Brown 2010, 61), taking it to denote a 'flint-knife' is perfectly logical, but I am not aware of any textual evidence that would suggest a connection between the *mds*-knife and bronze (Meeks 1981, 180; Wilson 1997, 481; Molen 2000, 191–2). In actual fact, the word *mds* etymologically most likely derives from *m ds* 'of flint' (Graves-Brown 2010, 46; 63), so surely 'bronze-knife' for *mds* cannot be accepted. However, I think that Yoo's basic idea is sound: *ds* and *mds* both refer to knives, but at the same time they are both made of flint, hence my renderings 'flint-knife' and 'flint-sickle'.

Flint was imbued with lunar symbolism in certain contexts in ancient Egypt (Graves-Brown 2010, 120; 186), and Coffin Texts spell 160 provides good testimony for this, because in it the lunar snake He-who-is-in-his-fire, responsible for eclipsing the sun, is described as '30 cubits in length, and the three cubits of its forepart are of flint' (*mḥ 30 m ꜣw=f mḥ 3 ḫnt m ḥꜣ.t=f m ds*; CT II 378a–b; Priskin 2016a, 109–10). We also have evidence that in ancient Egypt the crescent moon – similarly to other cultures – was envisaged as a sharp cutting tool (Kees 1925, 2–5; Derchain 1962, 41). Therefore, I think that in spell 246 the speaker claims to be the two knives in the hand of the moon god Thoth because they represent the last and first lunar crescents, that is those forms of the moon that frame the period of invisibility, which is of course the main subject of the text under investigation.

(e) This part of the spell, talking about not circumambulating the arms (or hands) of two divinities, is rather enigmatic. The hands of Horus, cut off by Isis and thrown into the celestial waters, are the symbol of the waning moon in Coffin Texts spell 158 (Priskin 2015, 107–9), but I cannot see how this story may have any bearing on the arms in spell 246. A possible clue to understanding their presence in this latter text is offered by a much later source. In his treatise about Isis and Osiris (end of 1st/beginning of 2nd century CE) the Greek author Plutarch writes:

In the sacred hymns of Osiris they call on him who is hidden in the arms of the sun, and on the thirtieth day of the month of Epiphi they celebrate the birth of the eyes of Horus, when the moon and the sun are in a straight line, since they believe that not only the moon, but also the sun is the eye and light of Horus (Griffiths 1970, 201).

As I explained it elsewhere (Priskin 2015, 154), the text clearly speaks of the event of conjunction because it emphasises that the sun and the moon are perfectly aligned, and it also cites the thirtieth day of the month, which was for the Greeks – starting the month with the appearance of the first waxing crescent – the day of lunar invisibility (Hannah 2005, 27). More pertinently to the present discussion, Plutarch also states that at the time of conjunction Osiris, the embodiment of the moon, is hidden in the arms of the sun. Some corroboration for Plutarch's claims may be found in the Ptolemaic festival called *ḥ3b sḫn nfr* 'the beautiful embrace', which involved the departure of Hathor from Dendera to visit Horus of Edfu on the day of the invisible moon (*psḏn.tjw*) in the month of Epiphi (Grimm 1994, 125–7; 424–6; Priskin 2015, 154–5). So possibly the appellation 'the beautiful embrace' did not only hint at the meeting of Hathor and Horus, but also at the encounter between the sun and the moon. Coffin Texts spell 246 may be another ancient Egyptian source in which the same concept – the blacked-out moon being in the arms of the sun – is alluded to. The speaker claims not to go around the arm of Horus and the arm of the Great One, and these deities in the particular context of the spell must refer to the sun. Horus is closely associated with the sun on the one hand through his eyes (see the citation from Plutarch above; Wilson 1997, 286). Also – especially in his various hypostases such as Horus of the East (*Ḥr.w-j3b.tj*) or Horus of the Horizons (*Ḥr.w-3ḫ.tj*) – he is directly linked to the rising sun at dawn, for example in utterance 325 of the Pyramid Texts (PT §§525a–33-e) or spell 723 of the Coffin Texts (CT VI 351g–4a). The epithet 'Great One' is also known sometimes to stand for the sun god (Leitz 2002a, 420), and we should not forget that spell 246 earlier also referred to the sun meeting the moon at conjunction with a designation that included the word *wr* 'great, Great One'. All this evidence suggests that the names Horus and the Great One evoke the sun in spell 246, and with the mention of their arms also the time of lunisolar conjunction.

The idea that the blacked-out moon is held in the arms of the sun, as expounded by Plutarch, perhaps derives from the Egyptian concept according to which the rising sun is being supported or assisted by a pair of arms. These arms are frequently depicted in the netherworld books of the New Kingdom or later mythological scenes (Piankoff and Rambova 1957, 22 fig. 3, 26 figs. 7a–8, 27 fig. 9, 37 fig. 20, 38 fig. 21, 39 figs. 22–3; Hornung 1999, 77 fig. 41, 104 fig.55, 109 fig. 60; Taylor 2010, 239 fig. 70). Ultimately, they may represent the waters of Nun from which the sun customarily emerges (Darnell 2004, 391–3). Thus, the arms of Horus and the Great One in spell 246 may also be related to these notions. In this case, too, the assertion that the speaker has not travelled around them entails that the moon is bound not to avoid the place of sunrise, and thus the monthly meeting with its brighter counterpart at conjunction.

(f) The lines 'I have not gone around, I have not gone around your arm, Horus, your arm, the Great One, and the Sound Eye is radiant and has provisions' have been omitted in the two other versions of the spell, and Arquier (2013, 304) believes that on Mesehti's outer coffin this was done so in order to prevent a reference to the full moon, because it would have been out of place in a context that was more concerned with the commencement of new cycles (day, month, year). From my foregoing reasoning it is obvious that the statements about the arms of Horus and the Great One point to the time of conjunction, and not the full moon. So Arquier's claim to the contrary is hardly tenable (and he himself admits that there are allusions to the full moon in the texts that usually follow spell 246, see Arquier 2013, 304, and my remarks about spells 248–249 above; also the arms are mentioned in the second part of the spell). It should also be added, however, that although the Sound Eye, as the healed and reconstituted eye of Horus, is indeed primarily connected with the full moon (Koemoth 1996, 204–6; Wilson 1997, 286–7; Kaper 2001, 480), sometimes it is used in a wider sense, to denote the moon more generally. For example, on the western wall of the pronaos of the Edfu temple (1st century BCE), next to the depiction of the lunar barque that is associated with the period lasting from the full moon to lunar invisibility (Priskin 2016b, 120–8), we can read about a group of beings hailing the moon: 'the bas of Hermopolis who witness the revelation of the Sound Eye on new-crescent day, following the god when he is the child of the day of invisibility' (*b3.w Ḫmn.w ntj dg3 wn-ḥr wḏ3.t m 3bd šms nṯr m ḥj n psḏn.tjw*; Chassinat 1928, 213; Priskin 2016b, 127). Here the Sound Eye is clearly referred to in connection with the beginning of the month, and perhaps it is this wider sense in which the term is also used in spell 246.

Having said that, it cannot be excluded that the Sound Eye should be understood as a reference to the full moon in the text. In this case, it is perhaps mentioned for the sake of establishing a connection between conjunction – the time when the moon is closest to the sun – and the resplendent full lunar disc, the time when the moon is opposite the sun and thus the farthest from it. Without its close encounter – 'embrace' – with the sun, it would be impossible for the moon to run its course and accomplish its ultimate duty at the antithetic moment of the lunar cycle, which is to act during its fullness as the equal of the sun at night. Spell 246, and particularly the lines under discussion may suggest that the conjunction of the moon with the sun was a vital moment on the way to its regeneration and to the state of being fully radiant again (grammatically *wḏꜣ.t ꜣḫ.t(j)* is either a participial statement or a subject-stative construction).

(g) Starting with the line 'I enter into fire and come out of fire', much of what has been stated previously is going to be repeated. This feature of the spell is perhaps most easily acknowledged if the first and second parts of the text are put side by side:

I am He-with-hidden forms amidst sunshine,	
I enter into fire and come out of fire,	I enter into fire and come out of fire,
the sunshine has not pierced me,	the sunshine has not pierced me,
He-who-is-always-found-great has not burnt me.	He-who-is-always-found-great has not burnt me.
I am the flint-knife and the flint-sickle that are in the hand of Thoth.	I am the flint-knife and the flint-sickle that are in the hand of Thoth.
I have not gone around, I have not gone around	I will go around (twice), I will oppose (twice)
your arm, Horus, your arm, the Great One,	your arm, Horus and the Great One;
and the Sound Eye is radiant and has provisions.	the Sound Eye is to be radiant.

We can see that with the exception of the title (here omitted) and an introductory statement at the beginning, the two parts of the text correlate line by line. This correspondence is verbatim at first, and deviations only start to creep in at the point when the theme of not going around – or going around – the arm of Horus and the Great One is elaborated on. The initial parallelism between the two parts of the spell is so striking that we may really wonder whether the original intention of the author(s) of the text was perhaps to recite the exact same lines twice. In this case the differences between the now existing passages must have set in as a result of some textual corruption that occurred when the master copy of spell 246 was recorded in local archives on papyri. Possibly another clue for this scenario is offered by the appearance of the phrase 'twice' (*sp sn*) towards the end of the text, which of course at present can be construed as referring only to the line 'I will go around, I will oppose', but which perhaps originally pertained to the entire first part of the spell. Howsoever it was the case, it is quite puzzling that the two parts of the text make contradicting statements: first the speaker asserts that he has not evaded the arms of the two deities, then he claims the exact opposite by indicating that he will go around them. Based on earlier arguments about the sun embracing the moon at its time of invisibility, we must suppose that it is the first part of the text that makes more sense. If, however, the different message of the second part is deliberate, it may refer to the prospective movement of the moon away from the sun after conjunction, or the counterpoint of conjunction, opposition, that is the time of the full moon, in accordance with the reference to the Sound Eye in the next line.

(h) The impression that the second part of the spell is somewhat corrupt is also deepened by the occurrence of the word *ẖft.t* (or possibly *ẖft.j*), which seems to be used as a verb, parallel to *dbn*, but which is surely a *hapax legomenon* (Molen 2000, 386). As most of the previous translators, I take it to be connected with the preposition *ẖft* 'in front of' and the related word *ẖft.j* 'enemy, opponent', and thus express the idea of being opposed to or opposite someone or something (cf. Faulkner 1973, 192; Carrier 2004, 599).

Conclusion

Coffin Texts spell 246 is yet another text that gives valuable insight into how the ancient Egyptians grasped and reflected on lunar phenomena, and especially the time when the moon was not visible for one or two days at the beginning of the month. The ultimate goal of the spell was of course, just as in the case of the

Book of the Moon, to help the deceased to attain a successful existence in the afterlife. One of their most conspicuous wishes was to join the sun god, Re, in his perpetual cycle of daily renewal. However, the sun with its scorching fire was also dangerous and to be in its vicinity – just as being too close to any real fire on earth – may have had dreadful consequences, so it was crucial to approach it with some care. With a monthly recurrence, the moon at the time of conjunction demonstrated its ability to endure a close encounter with the sun, because one or two days after the disappearance of the last crescent the first crescent inevitably appeared at sunset over the western horizon. With its failsafe behaviour the moon no doubt provided a 'role model' for the dead, and spell 246 must have been conceived in order to imbue them with the same ability to enter into and come out of fire, that is to survive in the immediate fiery environment of the sun.

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Macro-lithic tools and cupules in the Gash Delta (Eastern Sudan): a preliminary study

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Introduction

This paper aims at presenting part of the results of the preliminary study on macro-lithic tools and cupules found in in the area of Gash Delta, Eastern Sudan (Fig.1).

This area, in particular the archaeological site of Mahal Teglinos (K1), has been investigated from 1980 to 1995 by the archaeological mission of the "Istituto Universitario Orientale" of Naples directed by Rodolfo Fattovich, then resumed since 2010 by the Italian Archaeological Expedition to the Eastern Sudan (IAEES) directed by Andrea Manzo, in cooperation with the National Corporation for Antiquities and Museum (NCAM). The mission was undertaken in order to outline the history of the peopling of this area, define the development of the cultures here attested, understand the commercial role of the people of Eastern Sudan in the trade between the Nile Valley, the Horn of Africa and the Southern Arabia and clarify the relationship between the Ethiopian highlands and the Nile Valley, considering the crucial position of Kassala region (Fattovich 1989; 1990; 1991; Fattovich *et al.* 1994; Manzo 2010, 2010; 2012 a; 2012 b; 2013; 2014; 2015;2016; 2017).

Figure 1. Map of the area of Gash Delta (Eastern Sudan), showing the location of Mahal Teglinos (K1), UA53 and Jebel Abu Gamal (JAG1).

The analysis here described was carried out during the 2014 and 2015 archaeological missions. Main goals of this study were, and still are, the reconstruction of the typo-chronological development of this kind of lithic tools, the delineation of their role in the socio-economic activities and cultural development, a better understanding of the destination of the different areas of the sites (domestic, funerary, ritual, etc.) through the activities they represented and the comprehension of the exploitation of raw materials and natural resources for their realization and utilization. The samples were recovered from proper stratigraphic units (SU) or during the surveys carried out in Mahal Teglinos (K1), UA 53 and Jebel Abu Gamal (JAG1). Their typology, shape, dimensions and other characteristics have been described in different lists and compared with the examples in literature. The observation of all the pieces has been made at naked eye, using a magnifying glass. This has allowed to have just a general idea of the distribution, the density and the orientation of the wear traces and to establish a first interpretation of the possible function of the tools, some of them here described and listed following a possible typological and functional division. The label "macro-lithic tools" has been chosen here following the work of J.L. Adams and other scholars, who consider this label as the best one to categorize this macro category of tools, characterized by very different shapes and functions, from grinding to polishing, up to pounding (Adams *et al.* 2009). The preliminary classification has been made also following the work of K. Wright, even though with some differences in the labelling of the tools (Wright 1992). It includes possible grinding tools, both related to the upper mobile part, such as grinders, crushers or handstone and the lower stationary, such as grindstone, grinding slabs or querns. The classification includes also hammerstones, used to percuss or strike and pounding tools, such as pestles, e.g. upper mobile stones, characterized by different shapes, in particular cylindrical or conical and pounders, e.g. core, spheroid or cuboid stone, characterized by irregular surfaces, due to battering fractures. Apparently, no polishers have been found or identified, while at least an abrader is included. These kind of tools were used for polishing, e.g. a surface treatment aimed at creating a smooth surface which reflect light or to shape objects by detaching of matter (Wright 1992).

During the same archaeological missions, some hollows in the rocks were recorded at Mahal Teglinos (K1) and Jebel Abu Gamal (JAG1). These holes, also known as "cupules" (Italian "coppelle"), are characterized by particular shapes and smooth surfaces or several tiny pits, probably the result of anthropic activities. Some others could be considered as the consequence of the alteration of the face of the inselbergs, due to different natural and chemical factors. It was decided to proceed with a documentation of the shape, the dimensions and surface condition of all the hollows found on the rock faces of the two jebels characterizing both the sites, in order to suggest some ideas on their functions and uses. All the examples have been georeferenced with a Total Station and mapped with ArchGIS[1]. Pottery fragments and macro-lithic tools were collected in the immediate vicinity.

Mahal Teglinos (K1)

Mahal Teglinos is located not far from Kassala city, at the northern end of Jebel Taka (Fattovich 1991). All the macro-lithic tools from this site came from domestic areas, dating back to Gash Group period (ca. mid-3rd millennium-1800 BCE) and Jebel Mokram Group period (ca. 1800 - early 1st millennium BCE). K1 VI was characterized by four living floors, with pottery and pits related to domestic activities. K1 IX had a domestic occupation with a thick burnt layer, characterized by burnt seeds, bones and pottery fragments. K1 X was characterized by 8 fireplaces associated to the same living floor (Manzo 2015; 2017). Unfortunately, many examples are just fragments, so it is not possible to reconstruct their original shape.

Grinding tools

Among these lithic fragments there are different possible grinding tools[2]. Some of them come from K1 VI B3, one of which (No.3) was probably related to the external portion of a granite grindstone, characterized by a smooth surface with oblique striations and vacuoles on the obverse. These finds date back to Jebel Mokram Group (second half of the 2nd millennium BCE). A fragment of a possible grindstone came from K1 IX (No.59) . It was brought to light from C1 SU 48 and it is characterized by a smooth working plan with a slight concavity in the middle, toward which different striations converged. All the finds from K1 IX dated to Gash Group, thanks to a sample from SU 2, dating 2285-2130 BCE and 2080-2060 BCE.

Three more complete examples come from K1 IX D2. The first one (Fig.2, No.38) is a fragment of a possible central part of a granite grindstone, characterized by a slightly triangular profile.

The portion of a granite grindstone from SU 11 (Fig.2, No.39) is very interesting. It has a rounded straight corner and a concave working plan, with striations, tiny pits and vacuoles. It is quite possible that originally it had a squared or approximately rectangular shape. It measures 14.2 x 14.7 cm, with a thickness between 3.9 and 6.1 cm. Another portion of a granite grindstone (Fig.2, No.52), characterized by a very concave working plan, was found in the same square, in SU22. It has different possible oblique and longitudinal striations, tiny pits and vacuoles scattered all over the very smooth surface. It is 17 cm long, 12.2 cm wide and 5.5 cm thick. However, considering the concavity and the traces it is quite possible that this tool was originally a mortar. The only example of a possible granite grinder was found in SU13 (Fig.2,

[1] This work has been made in cooperation with Vincenzo Zoppi.
[2] Almost 16 fragments or portions of possible grinding tools have been found in K1.

No.43). It has a rounded triangular or ovoid narrow shape, with a double working plan, characterized by different striations. It measures 9.2 x 9 x 2.2 cm.

Figure 2. Portions of grindstones (38, 39, 52) and an ovoid narrow grinder (43) from K1. N°52 could be considered also as a mortar. Ph. Francesco Michele Rega.

Pounding tools and hammerstones

Different examples of possible hammerstones and some pounding tools[3] were found in Mahal Teglinos, the first ones characterized by a spheroidal or irregular shape, the second ones by a cylindrical or conical shape. Inside B4 SU5 there was a big tool (No.11), probably an hammerstone, characterized by pitted depressions, in particular in the middle of both sides and impact marks. A possible hammerstone with an irregularly spheroid shape (Fig.3, No.14) was found inside B4 SU15. It has different percussion marks and battering fractures on the obverse and along the sides. A fragment of a possible granite cylindrical pestle (No.1) came from K1 VI B3 SU5, while another one came from B5 SU 23, with a more conical shape, and probably also used for crushing activity (Fig.3, No.23). These SUs date back to Jebel Mokram Group, Beta 404212 (AMS): 3450+30 BP, calibrated 2 σ 1880-1680 BCE.
Two interesting lithic tools were found in K1 VI B5 SU15 and K1 IX D2 SU13. The first one (Fig.3, No.21) is a possible pounding tool or a little anvil (6.4 x 7.2 x 4 cm), considering the central depression with percussion marks on the reverse. This lithic tool dates to Jebel Mokram Group. The second one (Fig.3, No.44) is a granite cylindrical pestle with multiple working surfaces, especially in the middle of the obverse and of the reverse, characterized by two depressions with percussion marks. It measures 9 x 4.2 cm.

These depressions could be the consequence of an active use, as an hammer, or of a passive use, as an anvil or a mortar. It is possible that these tools, especially the first one, were used for a different purpose or reuse for a different function (multifunctional tools). Comparisons could be made with some tools found in the area of Seglamen, Ethiopia and studied by L. Phillipson, who suggests a possible reuse of some pestles as little anvil (Phillipson 2012: 8; 10, Fig. 7b). Tools with double or more functions were found also in other

[3] Almost 40 hammerstones (or fragments) and 5 possible pounding tools have been found in K1.

Figure 3. An hammerstone (14), a possible pounder or little anvil (21) a possible conical pestle and a cylindrical pestle (44) probably also used for different purpose from K1 VI B4_SU15. Ph. Francesco Michele Rega.

archaeological contexts, such as the mine site of Gebel El-Zeit in the Eastern Desert, here labelled "outils polyvalent" (Castel, Soukiassian 1989: 117-120). They are characterized by percussion marks on the tips and impact marks and depressions on the sides, not so different from the samples found in K1, as much as another one from Jebel Abu Gamal (see below). However, it is not possible to assign the same functions to the tools from Eastern Sudan, considering that the ones from Gebel El-Zeit were used in mining contexts and in relation with metal picks, as attested by metal traces on the surfaces.

Cupules

During the 2014 expedition, ten hollows were recorded in Mahal Teglinos (K1), four of them with very similar quite smooth surfaces.

In particular K1C1 and K1C3 have similar shapes and dimensions, measuring no more than 40 cm of diameter. Both are still used today for lighting fire. K1C4 and K1C5 are smaller and not so deep, around 30 cm of diameter and respectively 5.5 cm and 7.4 cm deep. K1C9 is characterized by a similar smooth surface, with pits in the middle, but it is located on the opposite side of the jebel. K1C7 (Fig.6) and K1C8 have small pits on the surfaces, probably due to their possible use. As for the other hollows, they are quite different. K1C6, for example, is a very shallow oval area, while, as far as we know, K1C2 (Fig.6) is the only example in Mahal Teglinos which stands inside an isolated rock boulder. It is characterized by some small pits and a quite smooth surface, especially in a restricted area. Finally, the last example is K1C10, the largest hollow found in K1, which is twice deep than the others. It has an outer diameter measuring 54 cm, an inner diameter measuring 42 cm and it is 24 cm deep. It was filled with rock debris and soil, unfortunately without any findings or other materials which might indicate a possible dating and function, which is very hard to explain, especially if we consider the position of the hole on a very inclined rock face. As for the clusters, only few groups of hollows are present: one is formed by K1C3 and K1C4. Another one is formed by K1C6 and K1C7, the first one associated with three little shallow areas, the second one with five of them. K1C8 is located near this cluster too. The last group is formed by K1C9 and K1C10, the first one located slightly below the second.

Unfortunately because of the nature of the site, which has been regularly frequented, it was not possible to establish a clear relationship between the hollows and the materials found around them, in particular for the pottery.

UA 53

Macro-lithic tools were discovered also in UA 53, located in the area of the Upper Atbara (Manzo 2010). Some possible sandstone grinding tools were brought to light during the 2014 archaeological expedition, although many of them were found during surface collections or survey. A little bread-shaped grinder comes from UA 53 XX B2, located inside SU1, on SU2, measuring 11.2 x 8.9 x 2.5 cm (Fig.4, No.5). It has different holes or possible crushing cupules on the surface, one of which in the middle, measuring 0.5 cm of depth. Other grinders come from UA 53 XX B2 (surface collection) (Fig.4, No.4), B3 (surface collection), C1 SU1 (Fig.4, No.7) and UA 53 XXIII B1 (surface collection). The first one has an irregular rounded shape, probably originally circular or bread-shaped, while the last three have a rounded triangular or ovoid narrow shape. All the archaeological units were characterized by Hagiz Group occupations overlapping Butana Group levels (4th - early 3rd millennium BCE). Moreover, UA 53 XX was characterized also by the presence of Gergaf Group pottery (15th –17th century CE) (Manzo 2015: 233-234). Considering this situation and the eroded condition which characterize UA 53, it is not possible to make a precise dating for the grinding implements.

Figure 4. An abrader (3) and three possible grinders (4,5,7) from UA53. Ph. Francesco Michele Rega.

For the same reasons, it is not possible to establish a precise chronological dating for one of the most singular examples (Fig.4, No.3), which came from UA 53 XVIII D2 SU1. It has a particular elongated shape (c. 10.4 cm long), with rounded corner and a V shape groove on the obverse and it is made in coarse sandstone. It was found not far from a grave of a child, which cut a living floor with Butana Group materials.

However, again, considering the disturbed and eroded condition of the area, it is not possible to confirm the relation with the grave. Nevertheless, the V shape groove suggests a possible use as an abrader or a sharpening tool, used to sharpen the tip of bone or wood tools, as in some native American contexts (Adams J.L. 2002: 82-84; Semenov 2005). Examples with similar traces were found also during the excavations of the Khartoum Civil Ospital directed by Arkell. They all have deep grooves obtained using a tool thick 5 mm (Arkell 1949: 69-70; Plate 40-41). Of course, only after a possible use wear analysis and combined studies, it will be possible to confirm or deny such hypothesis.

Jebel Abu Gamal (JAG1)

Jebel Abu Gamal is located on the border between Sudan and Eritrea, South-West of Kassala. It is a multiphase site characterized by tumuli and rock shelters, at the foot of a granitic jebel (Manzo 2016). All the macro-lithic tools in this site were found during a survey occurred in the 2015 archaeological mission. This survey was carried out in order to find possible tools in the surrounding areas of the jebel sides, characterized by different clusters of "cupules".

Pottery fragments were collected in the surrounding areas of the clusters in JAG1, but it is not possible to date for sure neither holes nor lithic tools. However, Cluster 1 is the only one associated with pottery of Neolithic period, which suggests a previous occupation, older than the Butana Group and the Gash Group periods. The most conspicuous occupation date to the Gash Group period, whose pottery has been found in association with five clusters (Clusters 1,2,5,6,7) and a doubtful one (Cluster 9). Jebel Mokram Group pottery were found near two clusters (Cluster 5 e 6). The dating of the pottery found near Cluster 8 is more doubtful, probably related to the Hagiz Group (1st millennium BCE – 1st millennium CE).

Grinding tools

Different examples of grinding implements[4] were found in JAG1. Two possible fragments of sandstone grindstones (No.17; No.19) were found near Cluster 6. Both have a slightly oblique smooth working plan, characterized by striations and vacuoles. In the surrounding area of the cluster some possible grinders were collected too. Two of them (No.15; No.20) have a rounded triangular or ovoid narrow and they were characterized by a convex working surface, slightly flat in the middle, with striations, pits and vacuoles. Similar examples were found also around Clusters 8 and 10. Near the first, there were two examples. The first one (No.29) has a triangular or ovoid narrow shape, with pits and striations on the reverse. The second one (No.34) has a more rounded and large shape, with striations on the reverse surface, suggesting a possible use also a little grinding slab. As for Cluster 10, the grinder (No.52) has two flattened faces, characterized by a smooth surface with striations, vacuoles and small pits. All the examples seem to have been sharpened in order to obtain this particular triangular shape.

Grinding tools were found also inside two significant archaeological contexts, Shelter II, a rock shelter located below Cluster 8, and Sector III (JAG1 III), the archaeological trench opened in front of it. Both the contexts were characterized by Hagiz Group pottery, which suggest a possible occupation of this area during this period (Manzo 2016). Of course it is not possible to date to the same period the tools. However they are interesting also for their shape. One example from Sector III B2 SU1 (Fig.5, No.47) is a fragment of a possible granite grindstone (11.5/5.6 x 9 x 3.9/3.4 cm), characterized by a slightly oblique and very smooth working surface, with striations, vacuoles and pits and also by a rounded rim on the shorter side, probably the original side. It is made of the same material of another fragment (11.6 x 9.2 x 4.7 cm) from Shelter II (Fig.5, No.37). It has a rounded straight corner, a particular triangular profile and a working plan, becoming particularly thin at one edge (3.5 cm). This particular kind of grindstone could be compared with those ones found in the Forth Cataract site of Hosh El-Guruf, labelled Type B or dished grindstones. Those grindstones are characterized by a rounded corner, a triangular profile and a working plan which became very thin.

According to C. Mayer, they are very similar to some examples from Kerma, dating to Classical Kerma (Meyer 2010: 41-42; 46). Of course, such hypothesis could not be confirmed without a proper study on the lithic fragments from both sites and on a wider record of examples.

[4] Almost 16 fragments or portions of possible grinding tools have been found in JAG1.

Figure 5. Portions of grindstones (37,47) a conical pestle, also used as a crusher (41) and a spherical hammerstone (53) from JAG1. Ph. Francesco Michele Rega.

Pounding tools and hammerstones

Pounding tools and hammerstones [5] have been found also in JAG1. The first ones have a cylindrical or conical shape. The second ones have a spheroidal or irregular shape, while two are more triangular in plan and quite large. Near Cluster 6 there was one example (No.13) with an obverse characterized by a circular shape and a reverse characterized by a central convexity, which create an ergonomic triangular profile. The tool has impact and battering marks, which may indicate a possible use as an hammerstone. Near Cluster 8 there was a mudstone cylindrical pestle (No.28), with pounding traces on both the rounded edges, while inside Cluster 10 there was a complete spherical example (ø 6.2 cm), characterized by impact marks all over the surface, which indicate a possible use as an hammerstone (Fig.5, No.53).

An example in granite from Cluster 6 (No.18) is characterized by an irregular cylindrical shape, although with a flattened obverse and a reverse, both characterized by striations, pits and vacuoles. It is not impossible that this tool was used both as a grinder and as a pestle. Another example (No.43), probably used for the same different purposes, is a possible granite cylindrical pestle, found in Shelter II. It is characterized by percussion marks on the top and on the base, where there are also some fractures. However, it had three flattened and worn sides, probably the result of grinding activities. Inside the shelter, there was also a possible granite conical pestle (Fig.5, No.41), characterized by percussion marks on the base and depressions in the middle of both sides, probably the result of repeated percussion or crushing activities on those areas, both direct or indirect, as suggested for the other example from Mahal Teglinos. It measures 9.5 x 5.5 x 4.6 cm.

Cupules

Ten clusters of hollows were recorded in JAG1.

Cluster 1 is formed by four holes located on one of the southern rock face of the jebel, at a ground level, while the nearby Cluster 2 is located on a raised rock boulder and it is formed by three hollows and a

[5] Almost 33 possible hammerstones and 4 pounding tools have been found in JAG1.

faint oval area. Cluster 3 surely is one of the most unusual of the site. It is located on very steep rock surface, under a possible rock shelter. It has five small hollows and three rock blocks which present oval depressions, two outside and one inside the shelter. Cluster 4 is formed only by two hollows which are related to two shallow areas. All the five hollows in Cluster 5 have a circular shape, but have different surface traces. JAG1C1 and JAG1C4 have a very smooth surface, while the others have a rougher surface, with traces of wear and pits. It is possible that they were used in a different way. JAG1C4 is associated with eleven small depressions. Cluster 6 is quite similar to Cluster 2 and it is made up of four cupules and a shallow area, on a raised rock boulder. On a rock just below the cluster another hollow, labeled JAG1C29, is located, which is very shallow. Near the cluster there is an isolated rock block with a hollow inside (JAG1C28). In the surrounding area of the cluster some possible lithic tools have been collected. Cluster 7 is made up of just four shallow hollows which are very close to each other, except for one of them, which is a bit below the other three.

Figure 6. Up: on the left, K1C7; on the right, K1C2. Down: on the left, Cluster 8; on the right, JAG1C37_SU3. Ph. by Francesco Michele Rega.

Cluster 8 (Fig.6) is one of the biggest among all Jebel Abu Gamal ones. It developed on three different rock boulders, one of them slightly detached. It counts nine hollows, some of them probably related to each other.

The first group is formed by two cupules, JAG1C12 and JAG1C13, the latter being one of the larger and deeper examples. The second group consists of a larger hole (JAGC14), plus two little shallow hollows, one circular, the other oval (JAG1C15 e JAG1C16). JAG1C14 was filled with soil containing a fragment of a possible pestle or grinder in it. The third group is made up of four cupules, two were very close together (JAG1C17 and JAG1C18), the other ones were a little far away. Below the rock boulders there is Shelter II.

Cluster 9 is the most southern one. The upper part of the boulder is punctuated by several depressions, six of them much deeper than the others. The first one (JAG1C38) is little distant from the others and it is surrounded by at least thirty shallow depressions. The other five are very close together and located on the opposite side of the rock boulder. Beyond the boulder there is a shallow area, almost rectangular and on the other side there's a vertical area with percussion marks. The most interesting aspect of Cluster 9 is cupule JAG1C37 (Fig.6), the deepest and largest one found in both sites. It has an outer diameter measuring 96 cm, an inner diameter measuring 85 cm and a depth (from the natural rock plan) measuring 60 cm. Inside of it, there were three stratigraphic units. In particular, SU3 had a singular disposition of stones, which reminds of a possible use of it as a fireplace, considering the presence of other burnt spots and seeds. However the stones didn't have any burnt traces, making this interpretation unsure. After the discharge of SU3 it was possible to see the bottom of the hollows, extremely smooth all over the surface and partially flat in the middle.

Finally, Cluster 10 consists of a cupule (JAG1C44) plus three grinding or rubbing areas, inside a possible rock shelter.

Preliminary Results

Macro-lithic tools

As is evident from this preliminary analysis, different kind of macro-lithic tools were found in the area of Gash Delta. Many hammerstones were brought to light or collected together with pounding tools and grinding tools, suggesting the presence of a different range of activities in the sites of this area of Sudan. Hammering seems to be the most attested activity, though a more precise study needs to be made in order to understand its purpose.

As for the archaeological contexts, only in Mahal Teglinos finds came from proper stratification units, characterized by domestic activities. These tools, especially those used to grind materials, were probably connected with such activities, also considering that from the same contexts many grass seeds came too (Manzo 2015). Therefore, it is quite possible that these grasses were ground by the lithic tools under examination, but such hypothesis could not be confirmed for now. As for K1IX, samples mainly came from a discharge area, probably thrown away here after the utilization. As for UA 53, also there some lithic tools came from domestic areas. However, as seen, the condition of the site makes any possible relation quite unsure, especially considering that almost all the examples were found during surface collections. Moreover, in this site different lithic workshops were recorded too, suggesting a possible different original context (Manzo 2010). In Jebel Abu Gamal, Shelter II e Sector III (JAG1 III) are the only defined archaeological contexts from which tools were collected, but also in this case not much could be said, considering the doubtfully relation between them and the domestic occupation found in these areas.

Concerning the raw materials, tools are made with sandstone, granite, mudstone and siltstone. Sandstone and in particular granite were used especially for grinding implements, granite was mainly used for pounding tools, while metamorphic and quarzitic rocks for hammerstones. Of course, taking into account the limited sample of finds, it is not possible to have a precise idea of the different raw materials used for tools production or make a specific statist analysis. As for the provenance, it is still not clear where precisely they were recovered, even though some of the samples were probably made with local materials.

Regarding the typology, the too fragmentary state of the samples makes it difficult to reconstruct their original shapes and to establish a possible typological development. As for grinding tools, the two examples from K1 IX D2 belong to a possible original concave grindstone, one of them probably with a squarish shape, suggesting the presence of such kind of grindstone at least during the Gash Group period in K1. As seen, one example from JAG1 was probably a fragment of a dished grindstone. As for the grinders, the rounded triangular or ovoid narrow one has been found in all the three sites, as shown by the example from K1 IX D2 SU13, in the Gash Group level, by the examples from UA 53 XX and XXIII, probably related to Hagiz Group pottery and by the examples from Cluster 6, 8 and 10 in JAG1. It is not impossible that in this area of the Easter Sudan this kind of grinder was very widespread and it has been used for a very long time.

The presence of tools with possible multipurpose use or different reutilization is particularly interesting, especially in the case of the first example from K1 VI. For the other from K1 and the one from JAG1 the traces could be just the consequence of at least two contemporary activities on more working faces.

Cupules

As seen, the dating of the cupules is still uncertain. This kind of hollows could be dated from Paleolithic to 20th century CE, according to the studies carried out on the other examples around the world (Bednarik 2008; 2015; Duwe 2016). As for the functions or their realization, it is not possible to say for sure if these holes are the result of an anthropic action, although for some of them it might have been so. Different hypothesis have been advanced, considering the sundry comparisons, some of them in Sudan itself (Fernández *et al.*

2003; Francaviglia 2005). Part of them have a "drop" or oval shape, probably used for grinding hard material, as much as hard rocks, in order to make stone rings, found all over the area of El Geili. Other Sudanese examples have been found near Amara West (Vila 1977) and in the area of the Fourth Cataract, usually near rock arts. In the latter many holes were used as musical instrument (Kleinitz 2004; 2006; 2007; 2008; Kleinitz and Olsson 2005). In Africa other hollows are located in Zambia, with different shapes (Derricourt 1986), while others are in Nigeria, the circular one used to separate the iron from charcoal and slag, the oval one used for grinding clay filled with quartz (Sassoon 1962). Here, in the area of Sukur, the scholar N. David has made a classification of the shapes, advancing also an interesting hypothesis, which stressed the idea that the portable grindstones came from the hollows on the rocks, passing through a very long development, that saw immovable boulders and massive slabs, large blocks or slabs very hard to transport and more transportable smaller blocks (David 1998). Other examples are located in the Tadrart Acacus area in the Sahara Desert (Mori 2000) and in the Ennedi Plateau[6], in the northeastern corner of Chad, found inside or near rock shelters, often with rock arts and petroglyphs. In Europe, some hollows are located in Italy and, as much as many examples in Africa, these hollows are often associated with rock arts and petroglyphs, in association with particular worship, first pagan, than Christian, especially in relation with Virgin Mary (Rizzi 2002; Arcà 2013). Cupules are widespread also in Great Britain, especially in Ireland[7], Sweden, Finland, Lithuania, Estonia and so on. Many of them are related to local myths, while others have been interpreted as possible astronomical maps, as much as pagan altars or sacred water basins (Vaitkevičius 2004). In America many holes, locally known as *chaw'se*, were used for grinding acorn and similar food until the last century (Clark 1907), probably as the examples in the Indian Grinding Rock State Historic Park, in the area of the Yosemite Park, in California[8]. Some others are considered as the earliest examples of rock art, with symbolic and religious functions (Duwe 2016). The same destination has been suggested for the cupules in Bolivia, India and Australia (Bednarik 2003; 2008).

These comparisons prove that the hollows in the rock could have many different functions or uses. These ones could be assembled in two groups:

Sacred/ritualistic uses. Cupules in this group could be considered: as the earliest evidence of rock art; as percussion musical instrument or gongs; as astronomical maps or cosmology representations; as basins for a temporary collection of meteoric water.

Practical uses. Cupules in this group could be considered: as mortars, for the reduction of hard or quite hard materials; as grindstones, for grinding hard or soft materials, such as grain, millet or other grasses; as modeling or sharpening areas, for the creation of tools, axes, rock rings etc.; as fireplaces; as basins for a temporary storage or collection of material, such as flour.

However, while an astronomical purpose is very hard to prove, artistic destinations and most of the practical uses are quite possible, depending on the shape and the depth. Moreover their use as basins for a temporary collection of water could not be excluded for the deeper hollows such as K1C10 and JAG1C37, both in association with very steep rock surfaces. Possible deeper future analysis on the surface of these cupules and experimental replications could clarify their destination and, in particular, their production.

Conclusion

What is clear from this preliminary study is that more needs to be done in order to increase our knowledge about macro-lithic tools and cupules in this area of Sudan. It is necessary to continue and complete the study of macro-lithic tools from K1, UA 53, JAG1 and other sites of Eastern Sudan, for better understanding the typological development of these kinds of tools and having more data. It is crucial to find more macro-lithic tools from stratification units, in order to have a more precise chronological record and a better idea of the original contexts, considering that domestic areas are not the only kind of context in which such kind of tools were used.

It is also absolutely necessary to make archaeological excavations near the clusters, in order to verify if macro-lithic tools also come from archaeological stratifications, to understand if there is a possible relation between human occupation and cupules and how old human occupation was in this area of the site.

[6] For details see: <http://www.britishmuseum.org/>
[7] For details see: <http://www.webgis.archaeology.ie/historicenvironment>
[8] For details see : <http://www.parks.ca.gov/?page_id=553>

On the finds from proper stratification units, it would be very important to conduct specific and deeper analysis. Employing use-wear analysis and residue analysis, combined with experimental replications is probably the best way to have a clearer idea of the function of these tools, as demonstrated by many studies (Adams 2002; 2010; 2014; Adams *et al.* 2009; Dubreuil, Savage 2013).

As for the cupules it is necessary to complete the mapping of the hollows, in order to have a complete idea of the distribution of these hollows and to carry out a study on the surface of cupules, in order to understand if they are natural or anthropic and how they were probably made or used.

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Stone architectural elements of the monastery at Manqabad and their typological classification

Anna Salsano

Manqabad and its stone architectural elements

In 1965, some archaeological remains of the monastery of Abba Nefer were accidentaly found in Manqabad, a town situated about 7.5 km west of Asyut. The site has been excavated for approximately thirty years (from 1976 to 2010) by Egyptian missions, but it was never studied properly until 2012 when the first Italian-Egyptian mission was carried out in the site, part of a project of the University of Naples "l'Orientale", directed by Rosanna Pirelli, with the collaboration of the University of Rome "la Sapienza".

During September-October 2014, the first long fieldwork of the project, about 60 stone architectural elements from Manqabad were examined; many others are still *in situ* and are kept in the storehouses of El-Ashmunein and Asyut (Shutby locality), since the inventories of the Supreme Council of Antiquities of Egypt (henceforth SCA) report about 185 architectural elements from Manqabad.

When I started the study of the architectural elements of Manqabad the first priority was to develop a methodology. One of the most difficult research problems is posed by the fact that their most important examples (i.e. from Bawit, Saqqara, Ahnas and Oxyrhynchus) were found between the end of the 19th century and the beginning of the 20th, then we lack of many information.

History of the study of Coptic stone architectural elements

Until the last decades of the 20th century a stylistic methodology was used; it followed an article of Ernst Kitzinger (1937), where he identified different stages of Coptic sculpture from naturalistic and smooth reliefs to more formalized ones with hard contours.

Some Coptic stone architectural elements had been reused in the construction of the Roda Nilometer, along with the Pharaonic and Greek-Roman blocks; they were found during the repair work between 1934 and 1939 and were published in 1942 by Étienne Drioton. He carefully studied the material, dividing it into typologies and finding numerous comparisons, but he relied on Kitzinger's chronology.

Ugo Hölscher published a volume about post-Ramesside remains of Medinet Habu in 1954 and wrote thoroughly about the Coptic city of Jeme, but he did not studied stone architectural elements in depth.

In 1963, John Beckwith published a monograph about Coptic sculpture, where he highlighted some problematic issues, like the provenance of many elements from illegal excavations, the difficulty in establishing a clear cut between Paganism and Christianity or between Christianity and Islam in Egypt and the poor interest in Coptic art by both the Egyptologists and the Islamists. He offers a quite wide repertory of Coptic sculpture, but he still follows Kitzinger's methodology.

Some years later, two articles by Hjalmar Torp (1968) and László Török (1990) caused an important change in the study of Coptic sculpture, because they explained that there isn't a sharp cut and naturalistic and stylized features can coexist on the same relief or in different reliefs for a long period; furthermore there are many regional varieties.

Unfortunately, the disproof of the absolute potency of the old stylistic methodology hasn't been followed by the formulation of a new one.

Stone architectural elements in the storehouses

The lack of a new proven methodology made me decide to combine the stylistic methodology with the comparisons with more surely dated architectural elements and with a typological classification.
Firstly, I divided the architectural elements examined in the storehouses into four groups:
A) Capitals (including a semi-column)
B) Lintels and elements of the friezes
C) Moulded elements

D) Miscellaneous architectural elements, including a window frame, rosettes and reused steles.

Capitals

The study of the Coptic capitals presented here relies on Patrizio Pensabene's Repertory of 1993, which includes a typological classification of Egyptian architectural elements from Hellenistic to late-antique period. Unfortunately it presents a useful classification only for some categories of late-antique architectural elements, such as capitals. Following Pensabene's classification, I identified three types of capitals. All the types have uncut leaves (namely foglie lisce); such types of capitals are the second class of the group of Corinthian capitals in local stone ("Coptic") from the 4th to the 7th centuries CE in Pensabene's Repertory.

All examined Manqabad capitals are semi-column capitals, but typological classification and comparisons can include column capitals as well, since Corinthian capitals are usually symmetrical in the front and rear part. Pensabene's Repertory refers to the number of leaves of column capitals; I'll follow his classification, though Manqabad capitals have half of the leaves of column capitals of the correspondent type.

The first type of Manqabad capitals includes two capitals, A4 (Fig. 1) and A7, and corresponds to the first subgroup of the above mentioned class which includes capitals with two crowns of uncut leaves with volutes and/or helices. However, this type does not fit with a known type, but is rather similar to Pensabene's type two: i.e. without chalices and with two crowns of uncut leaves, with protruding little leaves under the top of the big ones, reduced or merged volutes and helices (Pensabene 1993, 163). A peculiar feature of the first type of Manqabad capitals is that the central leaf of the second area is more protruding than the others and the lateral leaves appear further flattened and almost devoid of curvature in the edge of the leaf. This feature is not present in any of the capitals of Pensabene's first subgroup of the second class. However, a similar arrangement of the leaves was found in capitals of different provenances: two capitals with uncut leaves from el-Ashmunein (Wace 1959, Pl. 27.7.9; Spencer et al. 1982, 15-16); two capitals with cut leaves from Roda (Drioton 1942, n. 14 and 20), one a foglie d'acqua capital from Antinoe (Donadoni 1974, Pl. 19.1.4) and one capital with cut leaves from Bawit (Chassinat 1911, Pl. 15-16). The comparisons suggest a chronology between the second half of the 5th and 6th century. Both A4 and A7 are painted in ochre yellow with black nuances and may come from the "northern chapel".

The identification of the second type of Manqabad capitals (Fig. 2) includes four capitals (A2, A3, A5 and A6) and offers really interesting data: it was attested only in the Monastery of Apa Jeremiah in Saqqara (NW of the main church) and was dated between the second half of the 5th and the beginning of the 6th century. This type corresponds to the second subgroup of the second class of "Coptic" uncut capitals in Pensabene's Repertory and coincides fairly accurately with its type six (Pensabene 1993, 163): i.e. with two crowns of four uncut leaves Manqabad capitals have a softer relief and a trilobal element hanging from racemes; similar hanging elements can be seen in some samples from Bawit (Chassinat 1911, Pl. 11.1) and Saqqara with trilobal (Quibell 1909, Pl. 23.3-4; Quibell 1912, Pl. 34.1, 35.1-2) and pentalobe (Quibell 1909, Pl. 23.1-2) upside-down leaves.

Figure 1. The capital of A4, a capital of the first type.

The capitals of second Manqabad type show also a pearling pattern along the central rib of the leaf of the first zone; this decoration is attested in samples from different centuries, but is more common in the 6th (i.e. Chassinat 1911, Pl. 51; Drioton 1942, 102). The general layout of the leaves of the entire capitals of the second type can be compared with the peculiar features and disposition of the leaves in the second area of the first type, then it is a sort of local peculiarity common to both the Manqabad types.

I've always joint the typological classification to the analysis of data from the recognizable decoration: the right lateral side of A2 and the left lateral side of A3 show at least two layers of polychrome paintings, sign of different phases of decoration. The presence of these paintings and of a lateral square projecting element, respectively placed to the left in A2 and A6 and to the right in A3 and A5, suggests also that they were placed to the sides of a niche; more precisely A2 and A3 could have been placed to the side of a niche of the northern chapel and A5 and A6 to the side of another one in the same building.


Figure 2. A2, a capital of the second type.

The third type of Manqabad capitals has been recognized in A1 (Fig. 3) and in a reused capital *in situ* and coincides with type nine of the third subgroup in the second class of "Coptic" uncut capitals in Pensabene's Repertory (Pensabene 1993, 163): i.e. with one crown of four uncut leaves without volutes. This type is attested in a wide chronological range, but capitals with similar proportions and shapes of the leaves are dated between the 5th and the 6th century (Quibell 1912, Pl. 6.3 and 35.6; Drioton 1942, n. 28; Pensabene 1993, n. 651; Tocci 2014, n. 8-9). A1 is painted in ochre yellow, red and green and shows a trilobal element in the "v" space between the leaves, which might likely be a residual trace of the depiction of a chalice.


Figure 3. A1, a capital of the third type.

We can assume, through typological classification and comparisons, that all types of Manqabad capitals can be dated between the second half of the 5th and the 6th century.The upper end is compatible with the last written attestation of Roman occupation of the site in 426.

I included in the same group also the semi-column A4. It leans against a pillar and is painted in ochre yellow; the shaft is tortile at the top and polygonal in the lower part with different motifs: "S" braided pattern, spirals framing rosettes with four petals, rhomboid pattern with floral motifs; the upper part of each face is decorated with a circular element. Coptic columns do not often present such rich decorations, but examples from major centres such as Bawit and Saqqara show similar richness in decoration, mainly laterally to niches and entrances. A4 displays a stripe pattern only on a lateral face of the pillar; this feature jointed to the richness of the decoration may indicate an original position laterally to a niche. The base of A4 is a square pedestal, horizontally divided by an offset into two parts, and it is similar to other bases, still *in situ* (see below), placed laterally to the eastern niches of the houses of the northern sector. Therefore, even the type of base of A4 confirms the hypothesis about the function. A4 and A7 could have been placed to the sides of the same niche in the northern chapel, since they belong to the same type and show the same ochre yellow painting and a similar stripe pattern on opposite lateral faces.

Moulded elements

The contextualization and the development of a typology of moulded elements couldn't rely on Pensabene's Repertory, then I've started a new typological classification based on the comparison with Roman moulded elements in Egypt. I divided moulded elements into two sub-groups with different functions and hypothetical positions.

Figure 4. C3, a moulded element of the first sub-group decorated with a vegetalised Lesbian cyma.

The first sub-group (C1, C3 and C4; Fig. 4) consists of architectural elements whose main moulding is *cyma recta* or *cyma reversa*. C1 shows a *cyma reversa* and two offsets in the lower part; C3 a *cyma reversa* topped by a fillet; C4 a *cyma recta* between a fillet and an astragal. Decoration is various: C1 displays a cross, C3 a vegetalised Lesbian cyma, C4 vineyard spirals and bead and reel (on the astragal). They could be placed in the upper part of the entablature or, when they show less prominent mouldings, in the separation point between lintel and frieze. However, the decoration with C1, the element with less prominent mouldings, suggests that it should have been placed in the upper part of the entablature of an opening of a minor building (such as a cell).

The second sub-group (C2 and C5; Fig. 5) is characterized by a smooth lower band, a smaller central band and a projecting *cyma reversa* upper band. It can be identified with the top part of the entablature (the *cyma reversa*) and its middle part (the smooth band). C2 and C5 have similar lower and upper bands, but different central ones: in C2 it is made of a scotia topped by a fillet; in C5 it is made of a baguette topped by a fillet. Despite the differences, both moulded elements should have the same functions.
C2, C4 and C5 show circular holes similar to those on same lintels and elements of the friezes (see below).

Figure 5. C2, a moulded element of the second sub-group decorated with a vegetalised Lesbian cyma.

Lintels and elements of the friezes

Lintels and elements of the friezes present a rich carved decoration with inscriptions and geometric, vegetable and zoomorphic subjects. As a result of the difficulties in setting apart lintels from elements of the friezes, I chose to create only one group. For example some elements could be indifferently part of the frieze or lintels of small openings.

Half of the elements in this group have circular holes at regular intervals; traces of rust and lime suggest that such holes may have been functional for the joint of decorative elements or rings. The same function could be hypothesized for similar holes on some moulded elements.

The study of lintels and elements of the friezes could not be based on mouldings, then I have studied their decoration, together with that of the elements of the other groups, and I found comparisons and started a typological classification of the single motives.

Stone architectural elements of Manqabad were decorated with common Coptic motifs: vegetal decorative patterns as the flower with four petals (A4, B4, B5, B6, B9, C2, C3, D14, D18), the vegetalised Lesbian cyma (B5,C2, C3, D16), the vine (B7, B10, C4, C5, D13, D19) and the pomegranate (C4 and d16); geometrical patterns as beads and reels (B9, C4, D20), the pearling pattern (D1 and D21), the cross (B4, C1 and D2) and knotted pattern (A4, D11, D12 and D25); furthermore a swastika meander with flowers (B6), a vegetal and geometrical pattern.

I found many different types of vine-leaves and I compared them with those of reliefs from Bawit, Saqqara, Ahnas, Oxyrhynchus, Tod, Fustat. Trilobate leaves (Fig. 6.2-5) were common in different places and for a long period, instead some types of polylobed leaves show similarities only with those from Bawit and from Saqqara: the type of polylobed leaf of C5 (Fig. 6.9) is similar to that found on an element from Bawit (Chassinat 1911, Pl. 29.3), especially for the presence of a double terminal lobe found even in Manqabad in C4 (Fig. 6.8) and B10 (Fig. 6.6) and in another case in Bawit (Chassinat 1911, Pl. 11.3); the polylobed of C4 is more similar to a type of leaf attested in Saqqara (Quibell 1912, Pl. 38.3), while the comparison with the just mentioned specimens from Bawit is less stringent for a different spatial arrangement of the parts; also the polylobed leaf of B7 (Fig. 6.7) shows features comparable with a type of leaf from Saqqara (Quibell 1909, Pl. 19, 20.1-4, 34.3). Polylobed leaves have a particular arrangement in B7: they are arranged conversely in pairs starting from the same forking stem, different pairs compose spirals. This unusual type of spirals this type of spiral has been recognized in Saqqara (Quibell 1912, Pl. 44.7), Tod (Bénazeth 1992, Pl. 32) and Bawit (Chassinat 1911, Pl. 44).

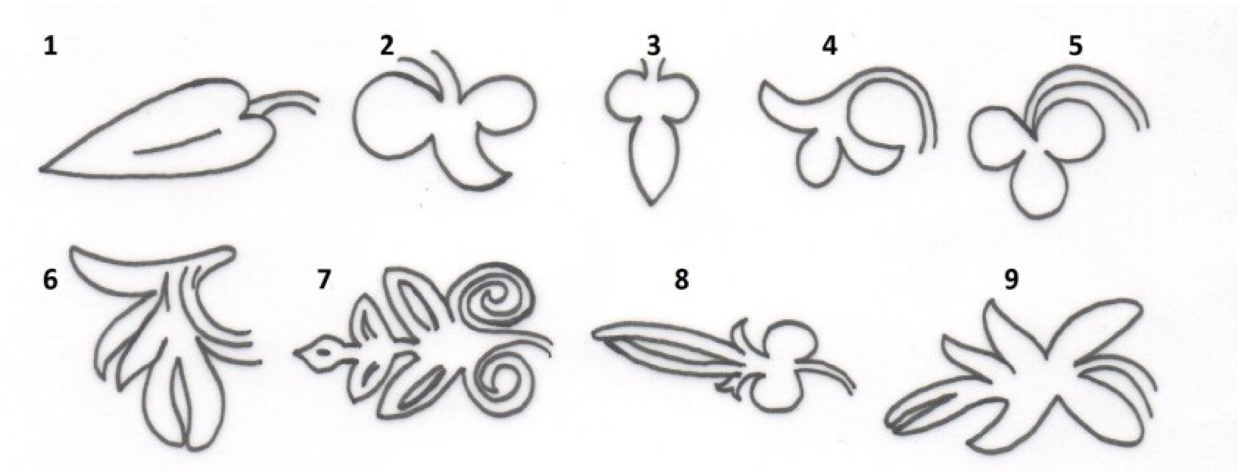

Figure 6. Types of leaves on stone architectural elements from Manqabad: 1) in C4; 2) in B10 ; 3) in A2, A3, A5 and A6; 4) in D19; 5) in C4, C5 and D13; 6) in B10; 7)in B7; 8) in C4; 9) in C5.

The vegetable decoration on B7 frames two squares, one with an inscription (unfortunately really fragmentary) and one with a peacock facing a cornucopia: this motif is common in Coptic and in Early Christian art and represents the link between faith and eternity. The peacock is symbol of the eternal life which the believer could reach through his faith, enjoying the fruits of God’s generosity symbolized by the cornucopia.

Figure 7. B2, an element of the frieze with two faced lions and a central "acanthized lotus flower".

The typological study of a single motif has provided an interesting result for the vegetal elements on B2 (Fig. 7): it shows dentate leaves in the lower part and two lateral racemes, similarly to an acanthus bush, but the central part has lanceolate elongated petals and is represented by a side view, similarly to a lotus flower. The blending of features of the acanthus plant with those of other species was widespread in Roman decoration and now is applied to a plant species particularly significant in Egypt. In Coptic art, the lotus flower kept the ancient meaning of immortality and rebirth, as in Pharaonic time, in fact some representations show an orantor saints in a meadow with lotus flowers, maybe symbolizing heaven or more generally immortality.

The "acanthized lotus flower" on B2 was represented between two faced lions, one is female and is nursing a puppy; such couple of animals was a biblical symbol of Lord's people (Genesis 49:9, Numbers 23:24 and 24:9 and Ezekiel 19:2).

A similar representation of faced animals with a central cross was very common in the early Christianity; and as lotus flower has a similar meaning to the cross, the Manqabad representation could be considered an Egyptian variation of this frequent Christian motif, revealing a singular blending between the Christian present and the Roman and Pharaonic past.

Miscellaneous architectural elements

This last group includes different kinds of artefacts that are still too few in number to constitute a separate category.

The most interesting stone architectural element of the group is D16 (Fig. 8), a window frame (50.5 cm × 48 cm × 5.5 cm), decorated with a vegetalised Lesbian cyma, with very stylized red pomegranates placed in the green arches and semi-palmettes alike vegetable elements in the spaces between. The element is cut by several recesses in the thickness of the frame. Other similar decorated stone window frames have been found in other monastery, but they are rarely wholly preserved and with an elegant polychrome decoration. D16 testifies also the existence of a monumental building of pharaonic era in Manqabad or in a neighbouring area, because it shows a hieroglyphic inscription on the lower face of the inscription; the dimension of the original block where the window frame was excavated – at least 50.5 cm depth and 48 cm wide –, indicates the monumentality of the original building.

An interesting category included in the same group is that of rosettes. Rosettes are cylindrical architectural elements with a floral decoration on a circular face. I examined three rosettes, but about twenty others are recorded in the inventories of the SCA. The three examined rosettes have different numbers of petals, more or less regularly carved and with dissimilar concavities. The rosette decoration is respectively framed by beads and reel, by a pearling motif and by a simple double band. However, the three rosettes have similar dimensions (between 10.5 and 18 cm in diameter), working signs on the lateral surface and a central hole.

One of the rosettes still shows a metallic ring-like pin in the central hole (Fig. 9); similar pins could be placed in the holes of the other rosettes and, probably in the holes of lintels and elements of the friezes. From the analysis of the findings it seems that rosettes were embedded in a vertical wall or at the bottom of an arch and presented a ring to hang any object, such as a lamp, a curtain or a censer.


Figure 8. D16, a window frame decorated with a vegetalised Lesbian cyma.


Figure 9. D21, a rosette with a metallic ring-like pin in the central hole.

Three architectural elements, D2, D4 and D14, have parallelepiped shape and show decoration on the minor faces and work signs on the major ones. They could be embedded in the walls like the rosettes; however, their shape makes unlikely that they could have been placed at the bottom of an arch.

The decoration of some elements shows striking similarities with specimens from other sites: D4, D5 and D6 are roughly parallelepiped element and display an "X" on the smaller face; they can be compared for shape and decoration with three stone fragments from Bawit (Maspero 1931-1932, 6 and 9), in addition, the arms of the "X" on D4 and D6 are red as on one of the specimens aforesaid (Maspero 1931-1932, 9).

Worth mentioning are two roughly quadrangular elements: D3 (14 x 12,5 x height 4 cm) and D23 (18,5 x 16,5 x height 4,5 cm). Their front face is shaped according to a profile consisting of a semi-circular segment enclosed by two quadrangular elements. The visible face of D23 is decorated with "X" inscribed in rectangles in a more or less regular way; all the sides are incised and painted alternately in red and black. The same element shows a circular trace on one of the bigger faces, similar to that of a column. The dimension of both the specimens are comparable with that of A4 and of some bases *in situ*; then dimensions, their shape, the position of decoration and the circular trace on D23 could suggest that D3 and D23 are bases of semi-column or of column embedded in the wall.

In group D, there are also refunctionalised tombstones (D7, D8, D9, D10 and D25): evidences for the refunctionalization are the presence of recesses and large holes, traces of lime and of chiselling.

Many of the "Miscellaneous architectural elements" are cut by recesses and holes useful to understand their original location. For examples, D9, a reused tombstone, shows a large circular hole approximately in the centre: the comparison with findings *in situ* with similar holes and dimensions has proved that it was probably used for placing the hinge pin of the door.

Recesses and holes were used for the joint between each other and with the mud-brick walls; indeed one interesting feature of Coptic decoration with stone elements is its composite nature: late antique Egyptians preferred to use smaller stone elements than Romans and combined them in various ways, like doing a puzzle. Coptic archaeology uses Roman mouldings in a poorly innovative way, but it frequently composes and places them in original manners; features of different orders are combined in new varieties.

Sometimes they kept the classical division in lintel, frieze and cornice; however, there are some differences and preferences: the moulding that divides the lintel and the frieze is often part of the middle part of the entablature instead of its lower part; friezes are frequently matched with lateral quadrangular elements, sometimes similar to capitals; the upper part of the entablature is often made up of an astragal and a cyma or cavetto moulding (which is a particularly common element in Egypt due to its Pharaonic past).

Other entablatures show freely alternating flat and curved mouldings. In both cases, the more classical entablature and the more innovative, they are the result of the organized composition by many stone pieces.

Stone architectural elements *in situ*

In addition to the architectural elements examined in the storehouses, I have started the study of some stone architectural elements *in situ*. The northern sector, analysed during the 2014 campaign, is composed by two rows of house units, several service structures and at least one chapel. Although the most commons building materials were mudbricks, the use of stone was quite systematic also in the domestic architecture.

In many housing units one or two stone bases are still present and are usually placed laterally to the niches in the oriental wall. The visible working signs and the traces of plaster indicate that many bases could have been entirely plastered. Pensabene presented a useful classification of classically moulded bases, but not of stylized moulded bases; therefore I developed a new typological classification which includes also the second ones.

Bases

Some classically moulded bases were examined in a monumental entrance to the northern sectors. They are attic bases with pedestal with only slight simplification; the simplification is more evident in the pedestal.

I identified four other types of bases with a progressive degree of stylization from the attic base with pedestal (Fig. 10):

-Type one: bases with a greater simplification in the rendering of the mouldings, but with evident distinction of the parts of attic base with pedestal; two offsets on the pedestal show the schematic parting in base, dado and surbase (or cymation).
-Type two: bases with only one offset in the pedestal and with poorly defined torus and scotia.
-Type three: bases without the parting of the pedestal and often without any indication of plinth and/or imoscapo.
-Type four: bases with different features, with an outmost degree of simplification that makes absolutely unrecognizable the different parts of the classical parting.

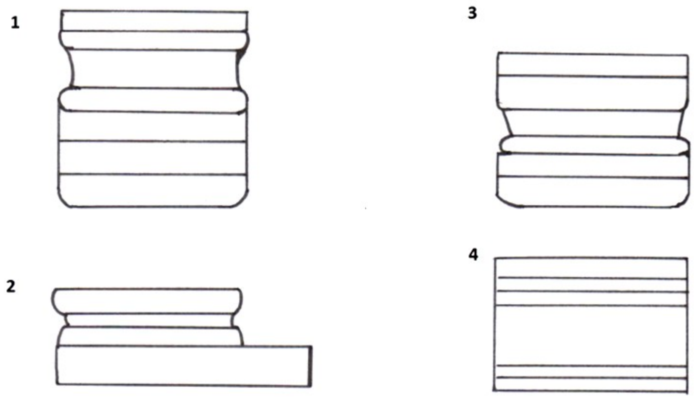

Figure 10. Four types of bases with a progressive degree of stylization from the attic base with pedestal.

These four types of Manqabad bases were all used as bases of semi-columns of the oriental niches of the houses in the northern sector and their stylization is not a clue of quality; indeed the most stylized type is used also in the most beautiful architectural element of Manqabad: the marvellous semi-columnwith vivid colours A4.

Paved areas

Bases are not the only stone architectural element *in situ* in the northern sector. Different areas of the northern sector are paved with stone slabs: 2S and 8S-9S were entirely paved with stone slabs; in 5S and 14S I could see only some stone slabs, but other could be still under the sand or could have been lost.

Thresholds and sills


Figure 11. A threshold made with a stone slab, in 3N.

Most of the thresholds of the housing units could be divided in two types:
-the first type of threshold is made with a stone slab, attested in 2S, 3N (Fig. 11), 9S1, 10N and 15N;
-the second type of threshold imitates a stone slab with bricks covered with good quality white plaster, attested in 12S1, 17N, 18N and 37N.

A third type of threshold could be identified in 30N, where bricks and small stone slabs are covered with plaster, maybe in place of one big stone slab.

The threshold of 15N is peculiar and is made up of two slabs: the frontal slab show traces of pinkish plaster on the edges.

Bricks covered with plaster, imitating stone, are not typical of thresholds, but are also used for two steps in a lateral entrance to the sector (12/13S2); a third step consists of a plastered slab.

Some sills of windows and niches are or could be also made of stone elements: in 37N, a window has a stone sill, furthermore the empty space between the mudbricks in front of it show that there could be another stone architectural element with a decorative function; in 4N, a secondary niche has a stone sill.

Accommodation of hinge pins

Stone blocks were also used as accommodation of the hinge pin of doors and windows (in 17S1 and 35S; Fig. 12), which could be opened through the rotation of pin: these blocks shows traces of their function, because they have a roughly circular blind hole and layered traces of usage. The study of these elements *in situ* allowed the understanding the function of the reused tombstone D9. In 2S another type of element with the same function was examined: a roughly parallelepiped stone element cut from a semi-circular hollow; this element could be partially embedded in the wall or placed longitudinally along the threshold.

Figure 12. Stone blocks used as accommodation of the hinge pin of a window in 17S1.

Reinforcing elements

Sometimes stone elements could be used to reinforce weak parts of the buildings or of various structures. In 2S some stone elements used to reinforce the frame of four windows are still visible; small stone pilasters reinforce the edges of three windows in 18N; small pieces of stones are placed under a window in 33N; in 14S two small slabs are placed perpendicular to the ground on the minor sides of a brick structure and the same happens for another slab on a similar structure.

Other evidences of the use of stones in similar brick structures are worth mentioning. The surface of a brick structure in 27S-S1 is covered with stone slabs. Many of these similar brick structures in the southern row of the northern sector are covered with pinkish plaster; they are probably basins, waterproofed with this kind of plaster. In 10S (Fig. 13), one of these pinkish structures shows a capital of the third type reused for reinforcement and decoration. It doesn't have traces of paintings and is cut by a quadrangular through hole, clue of his function of supporting a wood beam. The reuse of an architectural element in a structure in the southern row of the sector is an important datum, since it proves the presence of different chronological phases.

Figure 13. A basin with reused capital of the third type in 10S

We could conclude that at least some structures of the northern sector were later than the chapels where the capitals were placed originally.

A fragmentary stone base, similar to those of the niches in the housing units, was reused in.another basin, in 29S-30S (Fig. 14). Then some basins of the southern row of the northern sector are later also to the building phase of the housing units when niches with stone bases were realized.

Figure 14. A fragmentary stone base reused in 29S-30S.

Shelves and others

Many housing units present more than one niche; the most important niche is that in the oriental wall, a prayer niche, other niches had various functions including the storing of objects and are equipped with shelves for this purpose. 5S1 shows a niche with stone shelves; a niche in 39N is still provided of two stone supports for the shelf, but its material (wood or stone) remains unclear because it has not been preserved.

A large amount of stone architectural elements of unknown original location was noticed in different areas of the sector; many come from collapsed structures, for example in 5S and 13S1. I haven't examined such elements yet and I hope that I will do it in the future in order to hypothesize the original collocation of as many elements as possible and to clarify the reconstruction of the original appearance of the northern sector.

Conclusion

As it is also true for stylistic analysis, typological classification could not be used alone for the study of stone architectural elements. Many information could be lost or misunderstood using only typological classification; for example the mere typological classification of the first and the third type is useless for their dating, but their chronology could be deduced from the combination of the typological classification and the comparisons with capitals showing similar proportions and shape of the leaves, then also through the use of stylistic analysis. The examination of archaeological data has been crucial for the understanding of the relative chronology between some basins in the southern row and some housing units and a chapel (or some chapels); however, it has been combined with the typological classification of the reused elements.

Typological classification has also provided information about relations with other sites (i.e. mainly Saqqara and Bawit), original functions and positions of the elements (i.e. for the two groups of moulded elements and the reused tombstone), absolute chronology (i.e. for the capitals) and maybe even about the religiosity of the inhabitants of the monastery (i.e. the meaning of the "acanthized lotus flower"). In synthesis, I think that the use of typological classification has been proved fruitful for the studies of Coptic stone architectural elements from Manqabad and its proper use combined with the study of the comparisons, the stylistic analysis and the examination of the archaeological data could constitute a valid methodology for the study of Coptic stone architectural elements. However, as a suitable typological classification exists only for Coptic capitals, until now, one of the future main goals for the study of these elements should be the creation of a suitable classification for all the categories of stone architectural elements, including bases, lintels, elements of the friezes, moulded elements, rosettes and others.

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The monumental tombs of the Asasif from the 25th-26th dynasties, between «cultural archive» and place of worship

Valeria Tappeti

Introduction

The topic of this paper is part of my PhD. research at the Sapienza University of Rome [1], focusing on the decoration programmes of monumental tombs, or *Grabpaläste*, of the Asasif valley (Thebes). These are, as is well known, the burial places of some high Theban officials, erected as their eternal monuments between the 25th dynasty (747-656 BCE) and the 26th dynasty (664-525 BCE).

These monumental tombs are characterized, among other features, by their decoration programmes, which shows selected excerpts of ancient funerary texts, both from the Pyramid Texts and from the Book of the Dead. These texts and associated scenes are repeated in most of these tombs, revealing the use of models from temple archives, and the practice of direct copying from older monuments.

By analysing the textual and figurative programmes of these tombs, the hypothesis of this source integration will be introduced trying to highlight the role of the late monumental tombs of the Asasif in the process of transmitting and editing texts and iconographic motifs. This paper will analyse the main cases of direct copies as well as of the integration of models from temple archives and direct copy evident in the decoration programmes of these late tombs. Therefore, some of the main examples of recurring spells excerpts from the Pyramid Texts and the Book of the Dead are provided along with some examples of direct copies of reliefs recurring within these tombs.

As the problem of "copy" is intimately connected to the accessibility of funerary monuments, the archaeological and ritual evidence is analysed in order to understand whether these monumental tombs were accessible, and if so, the circumstances in which they were visible. These assumptions maybe allow us to consider in a new perspective the concept of "direct copy" and the use of models: the monumental tombs of the Asasif and their versions of the main religious corpora and motifs may have had a pattern function and they may have not just been burial places. It is clearly an assumption that could generate some debate and must necessarily be based on the work of the archaeological missions operating in these tombs, some of which are still being excavated. Therefore, this hypothesis, which is only suggested here, will be analysed during my doctoral research.

The concept of 'copy' and the Late Period transmission system

The problem of direct copy and of the transmission of models during the Late Period is a variously debated topic. Although it is difficult to determine definitively the direct dependence of an inscription or relief to an older work, according to Peter der Manuelian (1983, 321), 'direct copy' can be defined as an obvious reproduction of an earlier text or representation, probably made by the use of an intermediary model or copy, such as a drawing or a sketch of the original work on papyrus or *ostracon*, specially made for the new work, as in the case of the *ostracon* with monkey found in the tomb of Anch-Hor and illustrated below.

The transmission system of 'copies' during the Late Period, and especially of the 26th dynasty is, however, not clearly defined. There are several assumptions, among which are some of the main theories related to the late monumental tombs of the Asasif that are listed below.

Peter der Manuelian (1983; 1994) distinguishes the use of direct copy for figurative representations typically used for the tomb reliefs, from the recourse to *Musterbuch*: a catalogue of scenes, figures and texts, stored in temple archives and especially used for the texts, in a diversified and not unique transmission system.

Manfred Bietak (Bietak and Reiser-Haslauer 1978-1982, vol. II, 225 *ff.* 232 *ff.*) recognizing the Kushite influence on the decoration programmes of the late monumental tombs of the Asasif, including that

[1] My thanks are due to Professor Paola Buzi for her kindly support during my PhD. research. Any responsibilities of fault, mistake or misunderstanding stated in this paper are of my own.

of Anch-Hor, suggests the use of pattern-books, written during the 25th dynasty from scenes of tombs from the New Kingdom close to the Asasif, particularly from the reign of Tuthmosis III and Amenhotep II. Examining the Book of the Dead in the tombs of Harwa and Petamenophis, Silvia Einaudi (2012; 2015; Einaudi and Werning 2013, 35) considers the possibility that a decorative pattern was available for funerary complexes in the Asasif during the Late Period and probably accessible to members of the Theban priesthood (Gestermann 2005, 398, 401).

However, the repetitions of the same sequences of spells within the late monumental tombs of the Asasif are combined with clear cases of direct copies. This suggests the hypothesis of the possible transmission of texts and scenes not only through models from temple archives, but also through the direct copying of the inscriptions and iconographic motifs from older monuments, in a real process of text redaction.

The textual selections from the Book of the Dead: references to the Kushite tombs and architectural concordances

In the selection and layout of the Book of the Dead chapters inside the late monumental tombs of the Asasif, it is indeed possible to observe references to the programmes of the oldest monumental funerary buildings of the necropolis, especially the Kushite ones: those of Karakhamun and Harwa.

Within the monumental tombs there are about 127 chapters taken from the Book of the Dead, placed in various locations in the rooms, ranging from the access to the grave until the burial chamber. In these spells selections, specifically addressed to the needs of the deceased and his protection from the dangers of the afterlife, a particular importance is given to some spells and their specific location within the architecture of the tomb. The choice of specific chapters for each tomb and their arrangement, in fact, corresponds to a desire for harmony between architecture and speech, according to a principle of symbolism.

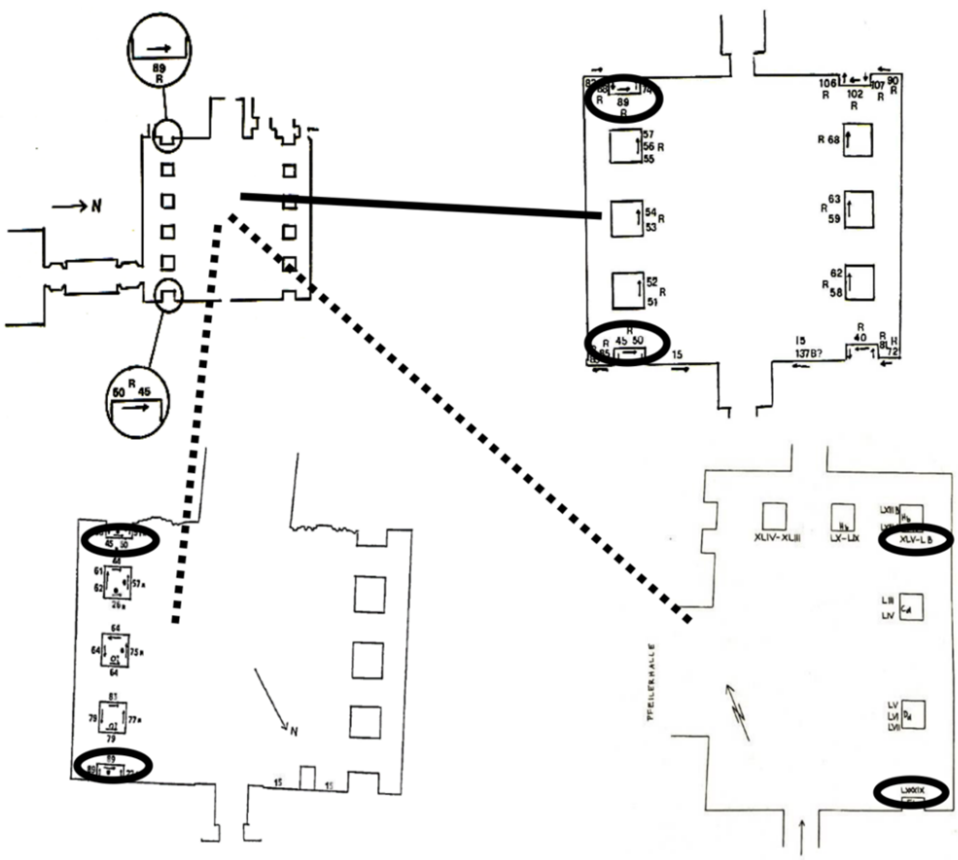

Figure 1. Recurring associations of the spells 45, 50, 89 in the solar court of Harwa -top, left-, Pabasa -top, right-, Sheshonq -below, left-, Anch-Hor -below, right-; the plans are not drawn to scale (Bietak and Reiser-Haslauer 1978-1982, vol. I, 108, Fig. 32; Rosati 1993, Figs.1-3; modified).

A recurring association is also evident in Chapters 45 and 50, often opposed to Chap. 89 (Rosati 1993; 2006, 289; Einaudi 2012, 28-9; 2015, 1649-650): as in the solar court of the tomb of Harwa, this pattern returns in the solar courts of the later tombs of Pabasa, Padihorresnet, Anch-Hor and Sheshonq (Fig. 1).

This is particularly evident for solar hymns, recognized in various extracts of Chap. 15 in eight monumental tombs (Einaudi 2012, 27-8; 2015, 1645, 1647-648; Griffin 2014b, 198, n.60 with references). Following the traditional layout of the New Kingdom, this spell is placed near the steps and the access to the tomb and to the underground section. The placement of Chap. 15h in the tomb of Karakhamun deserves particular attention (Griffin 2014a, 252; 2014b, 189). In fact, this hymn to the setting sun is inscribed here on the western wall of the second pillared hall, the wall that opens the way to the burial chamber, and also an allusion to the hereafter.

These spells, as also mentioned by Gloria Rosati (1993; 2006) and Silvia Einaudi (2012; 2015), present topics related to the main dangers to which the deceased may succumb in the hereafter: the decomposition of the corpse (in Chap. 45), the slaughter (mentioned in Chap. 50), and, finally, the impossibility for the Ba to join the body (evoked by Chap. 89). Placing these spells within the same room is therefore intended to protect the deceased from dangers in the netherworld, guaranteeing him eternal salvation.

A clear reference to Karakhamun and Harwa's programmes is evident in the textual choice of the tomb of Pabasa (Einaudi 2012, 24; 2015 Molinero Polo 2014b). The spells selection and layout in this monument, as a matter of fact, follows those of the Kushite tombs, as for Chapters 17, 45, 50, 51 and 89 of the Book of the Dead.

Furthermore, the recurring chapters within the monumental tombs, in addition to various extracts of the solar hymn of Chap. 15, seem to be the spells 45, 50, 53, 55, 56, 57, 59 and 89 BD, connected to the main needs the deceased may experience and dangers which he may incurs in the afterlife. These spells are present in the most ancient tombs, those of Karakhamun and Harwa, with the exception of spells 53 and 56 BD for the latter one. The influence of the Kushite tombs, therefore, clearly appears in the choice of textual and iconographic selection of other monumental tombs of the Asasif and probably in the Late Period version of the Book of the Dead.

Additionally, in the tomb of Petamenophis dated between the 25th and 26th dynasties, extracts from the Book of the Dead are inscribed in several rooms, from the two pillared halls to the burial chamber (Traunecker 2008; 2014). Particularly interesting is the repetition within the burial chamber of some Chapters of the Book of the Dead (Chapp. 142, 144, 148 and 137A: we found also BD 142 and 148 in the second pillared hall, BD 144 in Room VI, and BD 137A in Room VI and Room XII. Gestermann 2005, 111 *ff.;* Traunecker 2008, 28 *ff.*; Einaudi 2012, 21), for which, according to Claude Traunecker (2008, 35; 2014), a different destination and, therefore, different readers inside the tomb itself could be assumed. The first versions of these spells inscribed in the underground rooms, in fact, were intended for the visitors and readers of the tomb, while the second, repeated inside the burial chamber, would be reserved for the exclusive use of the deceased (Traunecker describe the tomb of Petamenphis as '*stone library, showroom of the results of the philological work of Padiamenope, and a subterranean temple*'; Traunecker 2014, 220-21).

This assumption, together with the call to the wise men in search of texts in the necropolis, inscribed within the tomb of Petamenophis, therefore, may allow us to assume that this funeral building - and arguably also the other late monumental tombs - was accessible to visitors, at least in part and especially in conjunction with the main festivals of the area.

Repeated textual selections from the Pyramid Texts: the case of the tombs of Harwa and Pabasa

With regard to the transmission system of texts in the late Asasif necropolis and the problem of the use of direct copies or pattern-books from temple archives, it is interesting to compare the Pyramid Texts selections in the pillared halls of the nearby tombs of Harwa and Pabasa, whose programmes show numerous similarities.

Within the late tombs of the Asasif valley there are some versions of the Pyramid Texts which show variations on the oldest editions of the Old Kingdom and consequently, in agreement with Peter Jürgens (1995, I, 9-26), Jochem Kahl (1999, 28-42) and Louise Gestermann (2005, I, 127-31), they cannot be considered direct copies from the Pyramids.

The selection of spells from the Pyramid Texts within these late monumental tombs of the Asasif is focused, in particular, on the sequences 213-219 and 245-304. However, the sequence of texts is almost never exactly the same, it appears, in fact, shortened or extended in a different way in each tomb (Molinero Polo 2015, 1446). Therefore, the use of certain nearby tombs as ‘archives’, integrated to the use of collections of texts stored in Theban temple archives and consisting of various sequences of spells inscribed in different tombs, is conceivable (Molinero Polo 2015).

In the tomb of Harwa, dated to the 25th dynasty, the wall to the right of the access to the pillared hall (northern wall) shows two series of spells from the Pyramid Texts comparable to the sequence inscribed on the corresponding wall of the pillared hall in Pabasa’s tomb (right access, western wall), dated to the second part of the reign of Psamtik I (Fig. 2).

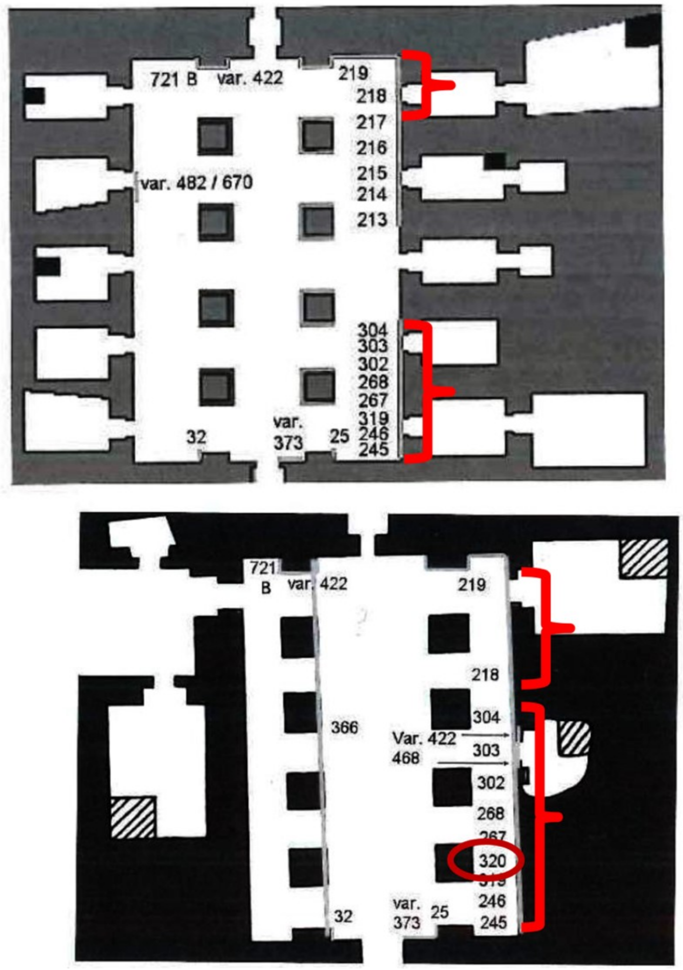

Figure 2. The Pyramid Texts selections in the pillared halls of Harwa -top- and Pabasa -below-; the plans are not drawn to scale (Molinero Polo 2015, 1441-1442, Figs. 3, 5; modified).

In fact, on the northern wall of the pillared hall of Harwa’s tomb, the columns of spells 245-246, 319, 267-268 and 302-304 are continuously inscribed and after a small break the sequence PT 213-219 is inscribed continuing on the western wall with the second part of spell 218 (Molinero Polo 2015, 1440). The hall of Pabasa’s tomb is smaller than that of Harwa, therefore the required space to repeat the long series of the tomb of Harwa does not exist. For this reason, it was probably decided to insert just a shorter series of spells (PT 245-246, 319-320, 267-268, 302-304, 218-219), to which, however, Pabasa adds the spell 320, missing in the tomb of Harwa (Molinero Polo 2015, 1439-1440).

The intentional choice of including this spell in Pabasa’s pillared hall suggests, therefore, that either a temple archive or maybe the inscriptions found in another tomb have at least been consulted for the selection of spells, as proposed by Miguel Angel Molinero Polo (Molinero Polo 2015, 1443).

However, the sequence of spells in the wall to the right of the access of the pillared hall in the tomb of Pabasa follows the same placement and arrangement as in Harwa's tomb: following a cut after the first part of spell 304 (in column 30) the sequence resumes Harwa's version again in the middle of spell 218 (from column 29) without paying any attention to the meaning of the text and beginning with the first sign of the first column of the west wall of Harwa's pillared hall, probably a very obvious point of the model (Molinero Polo 2015, 1443-1444).

So, it cannot be ruled out that the version of Pabasa depends on that of Harwa, considering also that there is clear evidence that the artists of Pabasa knew the decoration programme of Harwa's tomb, as in the case of the 'two-headed' Anubis, which will be discussed later.

Even if we consider the copies of texts apart from figurative scenes, a possible clue to the reference to Harwa's version is given by spell 219: badly ruined in the tomb of Harwa, it follows spell 218 as spell 219 immediately follows 218 on the south wall of Pabasa's pillared hall. Although Harawa's text is so seriously damaged that it is not possible to make an immediate comparison with that of Pabasa, its final part is preserved, making it clear that both versions are incomplete and were cut at the same paragraph (Molinero Polo 2015, 1444). This is a further evidence of the affinity of the two versions.

So, it is possible to acknowledge the version of Pabasa as an example of integration of direct copy from the older tomb of Harwa as well as the use of collections of texts from temple archives.

Cases of direct copies of figurative scenes: the monkey in the tomb of Anch-Hor and the 'two-headed' Anubi

Further confirmation of this hypothesis can be observed in the analysis of figurative representations that support and complete the spells selections within these tombs.

The decoration programmes of these funeral buildings show iconography and themes often related not only to a single model, but also to different periods of Pharaonic history. According to the more general concept of archaism of the 25th and 26th dynasties, these versions, in fact, can mix together influences of various periods by combining different styles, both of previous and contemporary ages (der Manuelian 1983, 232). In fact, examples of direct copies are known both from the oldest monuments and of the same historical era.

In the tomb of Anch-Hor, dated to the reign of Psamtik I (664-610 BCE) and Aprie (589-570 BCE), to give an example, in the open-air court, on the third register of the western wall, a sitting monkey is depicted while eating fruit below the seat of the deceased (Fig. 3).

Figure 3. Relief from tomb of Puyemra (TT 39) -left-, the ostracon with monkey -centre-, relief from the tomb of Anch-Hor -right- (der Manuelian 1994, 23, Fig. 4; modified).

Next to this representation an *ostracon* was found, showing a sketch of a monkey sitting while eating fruit in front of a basket filled with fruit (Bietak and Reiser-Haslauer 1978-1982, vol. I, Figs.. 26-27, vol. II, pl. 42b, 43a, pl. 17).

This representation has a parallel in the tomb of Puiemra (TT39) at el-Cocha, dated to the reign of Tuthmosis III (der Manuelian 1994, 21-4, Fig. 4). On the northern wall of the hall the deceased and his wife are depicted, both sitting. Below the seat of the tomb owner a little monkey is portrayed in the same attitude reproduced in the *ostracon* of Anch-Hor. It is, therefore, a case of direct copying of an iconographic motif from a more ancient tomb (der Manuelian 1983, 224; 1994, 21-4, Fig. 4): by drawing up a sketch on an *ostracon*, it was, finally, remodelled for the decoration of Anch-Hor's open-air court.

Among the cases of direct copy related to internal models of the Asasif valley, is cited the famous case of the 'two-faced' Anubis reproduced in Harwa and the version inside the Saitic tomb of Pabasa. The decoration programme of the latter tomb, as previously mentioned, is strongly influenced by the iconographic and textual plan of the nearby Kushite tomb of Harwa.

In the passage from the pillared hall to the chapel of Harwa's tomb the god Anubis is represented holding the deceased by the hand and accompanying him to the netherworld for his revival. In this representation the god is two-faced; this is clearly an artist's error. The first version of the relief, in fact, depicts Anubis with the head turned back toward Harwa. Then, likely following a rethink, the deity was represented looking forward. Probably, the previous head was ultimately covered with plaster (Tiradritti 2004, 176, n. 26). This renaissance scene finds an exact comparison in the passage from the pillared hall to a side chamber in the tomb of Pabasa. Here, the god Anubis grasps the hand of Pabasa leading him to the hereafter. However, the representation is depicted with a detail which at first does not appear comprehensible: in front of the head of the god is drawn a curved line that has no obvious relationship with the portrayed scene (Tiradritti 2004, 176, n. 26; Molinero Polo 2015, 1442). From a careful comparison with the version of the relief in the tomb of Harwa it is clear that the curved line of Pabasa is attributable to the depiction of the rear extremity of the wig of Anubis's first head in Harwa, turned towards the deceased. Therefore, it can be assumed, that at the time of redaction of the decoration programme of Pabasa's tomb, when, in Harwa's tomb, the plaster placed to cover the artist's error fell away, the artists of Pabasa went to the oldest tomb in search of inspiration and used it as a direct model (Tiradritti 2004, 176, n. 26; Molinero Polo 2015, 1442).

Petamenophis and Ibi: the appeal to the wise men in search of texts and the invitation to copy texts

Taking all that into consideration we may presume that these late tombs were accessible. In support of this possibility an inscription placed in the XII corridor of the tomb of Petamenophis (TT33), the passage to that part of the tomb that Claude Traunecker defines '*(…)la partie spécifiquement liturgique et de consultation des textes anciens de la tombe*' (Traunecker and Régen 2016, 62) is cited. In these rooms, in fact, both a short version and a complete one of the *Amduat*, the *Book of Gates* and the *Book of Caverns* are inscribed. A second copy of the short version of the *Amduat* as well as some chapters of the Book of the Dead are drawn inside the burial chamber and reserved to the exclusive use of the deceased. The access to these rooms, the temple of Osiris and the 'library of funerary texts' (Traunecker 2008; 2014, 217-21; Traunecker and Régen 2016) was probably reserved for a limited audience (Traunecker 2014, 217).

Proceeding towards the funerary building interior, then, on the right-hand panel of the passage a standing Petamenophis welcomes the visitor, while on the opposite panel a short text of four columns with an appeal to the living is addressed directly to the wise men who go through the necropolis in search of texts (Fig. 4). In an extract we can read:

'[1]…those born and those who will be born (in the future),
those who come as followers of Montu, [2]Lord of Thebes,
those who come to amuse in western Thebes,
those who pass for any kind of spells,
[3]may they enter this tomb
to see what is inside …'

Figure 4. The appeal to the living in the XII corridor of the tomb of Petamenophis (Traunecker and Régen 2016, 66).

In this text Petamenophis addresses not only the contemporary visitors but also the future ones. Referring to different categories of people and especially to the wise men in search of ancient texts he testifies, as suggested by Traunecker (Traunecker 2014; Traunecker and Régen 2016), the multifunctional value of his tomb. It is not a simple burial place but, with its versions of the major Egyptian funerary texts (Book of the Dead, Amduat, Book of Gates, etc ...), it is also a ‘cultural archive’.

Even if we consider this inscription as a simple literary *topos*, as part of ‘the appeals to the living’, and not a real invitation to access the tomb of Petamenophis, addressed to real visitors, we have to reflect on one particular aspect of this text. Referring, in fact, to those wandering in western Thebes and those who go in search of spells, Petamenophis is probably telling us about a practice widespread during this period, of a kind of pilgrimage of scholars to western Thebes in search of ancient texts in close connection with the cults officiated in the necropolis. Looked at in this light, the process outlined by Claude Traunecker (2014; Traunecker and Régen 2016) for the tomb of Petamenophis as a place of pilgrimage in connection with the Decade Festival, may, perhaps, not be confined to this tomb alone and may also be connected to the centrality of the Beautiful Feast of the Valley during the Late Period. The appeal of Petamenophis to the wise men in search of spells, in fact, can be compared to an inscription inside the nearby Saitic tomb of Ibi that carries an invitation to copy text (Fig. 5).

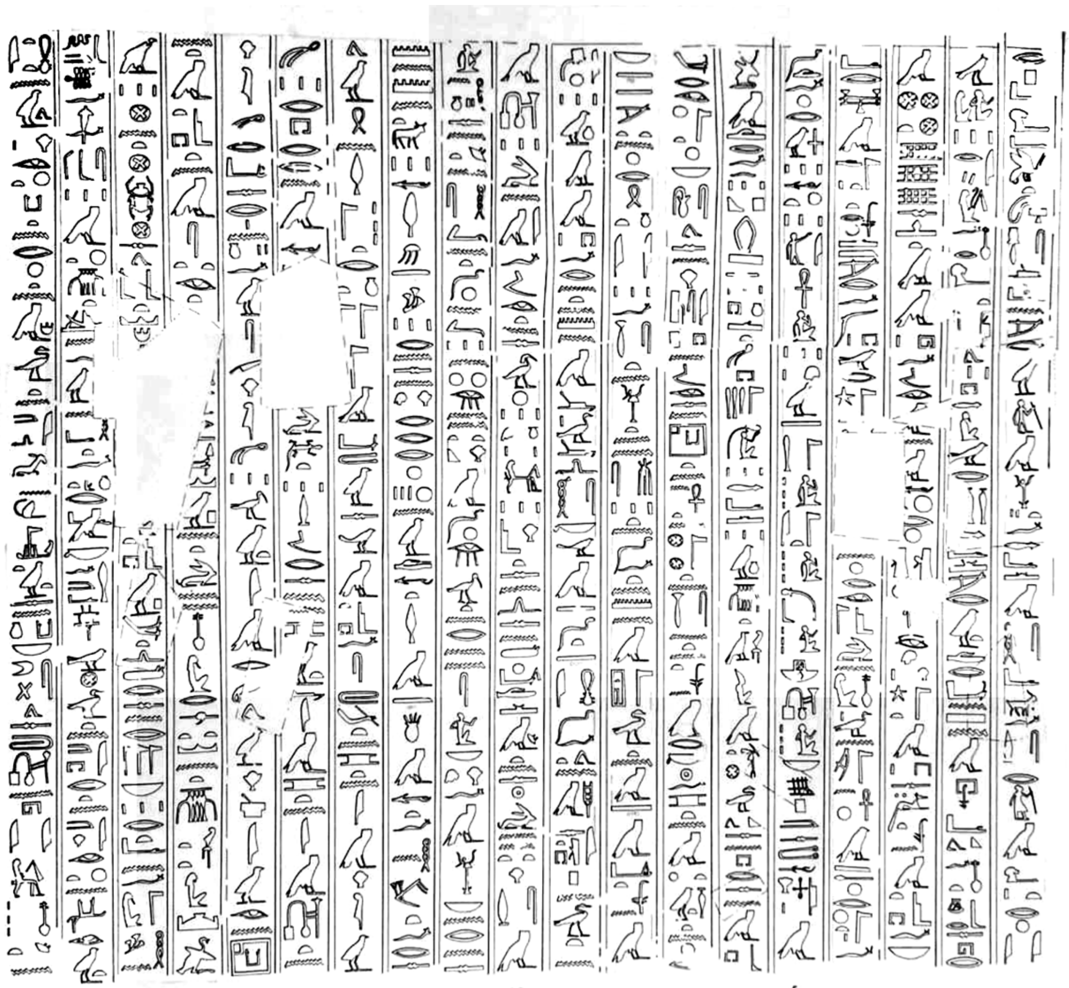

Figure 5. The appeal to the living in the colonnade hall of the tomb of Ibi (Kuhlmann and Schenkel 1983, pl. 23).

In this inscription (Kuhlmann 1973, 206-07; Kuhlmann and Schenkel 1983, 71-3, text n. 98, pl. 23) inscribed on the west wall of the colonnaded hall (R2), the deceased exhorts priests, scribes and passers-by to visit his tomb, to concentrate on the writings that are inside, to ‘look at the glorification spells of the venerable in

their place, without neglecting the wealth' (Ibi's text n. 98, column 10; Kuhlmann and Schenkel 1983, pl. 23). Following this there is a description of the decoration of the walls and an exhortation to copy the inscriptions and to leave graffiti, ending with a request for funerary offerings (Kuhlmann 1973, 205).
The following is an excerpt of the text (Ibi's text n. 98, column 13-15; Kuhlmann and Schenkel 1983, pl. 23):

'[13]...Copy what you like on the empty papy-
[14]- rus, for that my name will be known, someone will see a lot of interest from an inclination towards one of them. What you like, write
[15]- on free surfaces, what a man says to his friend, it is engraved on the free space, there will be found engraved'.
The text concludes with the following statement: 'the copy of the venerable and excellent collection of spells, listen!' (Ibi's text n. 98, column 19; Kuhlmann and Schenkel 1983, pl. 23).

The description of the decoration of the tomb begins with the reference to ancient and venerable texts and fully agrees with what is visible inside the Saitic tombs. However, in the description of the reliefs are also listed some representations that are not present within the programme of the tomb of Ibi, for instance the topics of gardens and livestock, which are found in other monumental tombs of the Asasif (Kuhlmann 1973, 211-12). On the basis of these considerations, it would therefore not be a text created *ad hoc*, but maybe the copy of another inscription. The version of Ibi finds a parallel in the text of the Saitic tomb of Puiemra at Sheiq Abd el-Gurna, but the two versions have some variants, thus both may derive from a previous model, not yet identified and, according to Klaus Kuhlmann (1973, 211), most likely of the Saitic Period (Kuhlmann 1973, 211, n. 53. For the text in the tomb of Puyemra (TT128) see: Schenkel 1975; the transliteration of the text with a German translation is available on-line at the Thesaurus Linguae Aegyptiae website [online]<http://aaew.bbaw.de/tla/>).

The affirmation of the text joins, therefore, the invitation to copy, along with the desire of the tomb's owner to be remembered in the distant future. The appeal to the living aims to one real purpose, which is to ensure the observance of the funeral cult of the deceased (Kuhlmann 1973, 21). What emerges is the concrete hope that the future owners of tombs, in search of inspiration for their tomb decoration, can find the older building, where they provide funerary offerings in return for the use of the works as models.

Peculiar to the late monumental tombs of Asasif is, in fact, the proven accessibility of at least the first underground rooms close to the solar court (Eigner 1984, 118; Budka 2009, 85; 2014, 45). This open-air court is the only area of the underground section open to sunlight and the ritual space par excellence: in this court rituals focused on regeneration and rebirth were celebrated for the deceased and for divinities such as Osiris and Ra (Eigner 1984, 118, 169, 185-191; Budka 2008, 85; 2009, 77-9; 2010a, 477-79; 2010b, 37-46; 2014; Coppens 2014, 343-44). In line with a process that began at the least at the end of the New Kingdom, these buildings sum up and fuse together the concepts of tomb and temple acquiring architectonic temple features and introducing divine cults in the funerary sphere (Budka 2008; 2009; 2014; Coppens 2014). The tomb, therefore, is no longer just the dwelling place of the deceased, but it is also a place designed for various rituals.

The focus of ritual action is the solar court, a space accessible to visitors, as numerous archaeological finds testify, for the performance of offering rituals that merge aspects of solar and Osiriac cults and that provide food offerings, libations and fumigation not exclusively for the benefit of the deceased (Eigner 1984, 118, 169, 185-91; Budka 2008, 85; 2009, 77-9; 2010a, 477-79; 2010b, 37-46; 2014; Coppens 2014, 343-44). This religious background is well connected with all that is previously described for the inscription of Ibi (Ibi's text n. 98: Kuhlmann 1973; Kuhlmann and Schenkel 1983, pl. 23), where tomb visitors are invited to enter and copy scenes and inscriptions on the empty papyrus in exchange for a ritual offer. Therefore, it is possible to reconstruct a process of transmission of texts and iconographic motifs closely related to the ritual sphere which does not replace the textual transmission through models from temple archives, rather it combines and integrates. Further evidence that these monuments were accessible, at least in part, are also the graffiti left by the visitors (Eigner 1984, 118; Budka 2009, 85; 2014, 45), as in the tomb of Ibi, where they are inscribed from the vestibule to the pillared hall (Kuhlmann and Schenkel 1983).

The monumental tombs of the Asasif, therefore, are not just burial places, but above all they are sites focused on the regeneration of the deceased and on the ritual action of the living. Thus, the sphere of action and function of these funerary buildings moves on many levels, as emphasized by their orientation. In fact most of them are oriented towards the processional route of the funerary temple of Hatshepsut, the main axis of the Beautiful Feast of the Valley with the procession of Amon from Karnak to the natural amphitheatre of Deir el-Bahari (Bietak and Reiser-Haslauer, 1978-1982, vol. I, 30-7; Bietak 2012a; 2012b). Each burial is, thus, integrated within the ritual context of the Theban area and of one of the most important Late Period festivals. Finally, these tombs were probably accessible, at least in conjunction with major festivities, such as the Beautiful Feast of the Valley.

Conclusion

Following the appeal of Petamenophis addressed to the wise men wandering in western Thebes in search of spells, a hypothesis is suggested, which will be examined during the doctoral research, that the late monumental tombs of the Asasif are not to be considered just as burial places. With their editing of the most important Egyptian funerary *corpora* and of the main iconographic motifs they may have played an important role as models and as 'archives', at least for the period between the 25th and 26th dynasties.

In this light it is possible to consider that these tombs were accessible and visible, at least in part, as various evidence seem to suggest. They may have had a function as models, as suggested by the textual selections of the Book of the Dead in the Saitic tombs, so similar to each other and influenced in some salient features by the decoration programmes of the Kushite tombs. It is plausible, therefore, that the use of direct copy, and not only the exclusive use of books of models or papyrus from temple archives, can be linked with the repetition of spells sequences and the recurring associations between text and architectural space within late monumental tombs of the Asasif.

These monuments could in fact be considered as a sort of 'cultural archive': by providing their 'lithic versions' of the main Egyptian funerary texts, they are a source of inspiration for the wise men in search of texts and for future tomb owners, as the appeals of Petamenophis and Ibi seem to suggest. Probably the owners of these late tombs intended to recover, preserve and transmit Egyptian funerary texts, therefore they are part of a cultural phenomenon of building and transmitting social identity in line with the cultural context of the 25th-26th dynasties.

The inscriptions of Petamenophis and Ibi, and the decoration programmes of the other monumental tombs outline a phenomenon seemingly centred on the late monuments of the Asasif valley, but which may not be confined to these tombs and could expand into the whole necropolis area.

Therefore, there would not be just a process of textual transmission through temple archive models, but a more complex phenomenon of imitation of ancient times and a process of textual and iconographic creation and editing, in close connection with the funeral worship and the main festivals of the area. Although we cannot deny the use of prototypes from temple archives in the transmission system of models during the Late Period, we should also consider the use of direct copy for relief depictions and text selections, as well as their placement within the architectural space, as shown by the decoration programmes of the late monumental tombs of the Asasif. Within this process the owner's choice becomes more valuable for the selection and layout of the decoration programme.

This is not the place to thoroughly explore all the implications associated with the role of models and 'cultural archives' of the late monumental tombs of Asasif, with all the required detailed analysis and comparisons. This is a hypothesis to be examined during the doctoral research, so here I propose a new perspective to analyse the problem of transmission of copies during the Late Period.

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Glazed terracotta decorations from the palace of Natakamani (B1500) at Napata: a typological and iconographical analysis. Italian Archaeological Mission in Sudan at Jebel Barkal (Università Ca' Foscari, Venice)

Salvatore Taurino

Introduction

One of the aims of the Italian Archaeological Mission in Sudan at Jebel Barkal during the season 2014 (Ciampini 2014), directed by E. M. Ciampini since 2011, was the study of pottery and finds of the previous excavations in the Meroitic royal district of Natakamani, which dates back to 2nd half of the 1st century CE (Ciampini 2011a; 2011b; 2012; 2013; Roccati 2004; 2008; 2011; 2012). This campaign was very significant for the knowledge of the large amount of materials that has never been studied systematically and scientifically by the previous managements and researchers. Unfortunately, much of the information are lost, such as their precise archaeological and stratigraphic context and topographic localization, although it is known that these materials were unearthed from palace B1500. The situation is further difficult because of the loss of several finds due to the disastrous flood of the Nile in 1988, which destroyed the house and the repository of the Mission in Karima, and the looting of the current storehouse in 1996 near the archaeological area of Jebel Barkal.

Among these finds, the polychrome glazed terracotta tile[1] from the palace are peculiar in type, placing, and iconography with no parallels in the former Napatan and Meroitic periods in Nubia so far, and are actually an innovation in Kushite art. These high- and low-relief tiles are a sort of *appliques* set both on the external perimetral walls and on the walls of the inner peristyle of the Meroitic royal building. This is suggested by thick layers of lime plaster, up to about 6 cm, and sometimes brick fragments of the walls of the palace that still adhere to the back of some of them. This kind of architectural decorations witnesses the astonishing eclectic culture of the Meroitic kingdom as they coherently mix pharaonic, Hellenistic, and indigenous themes and motifs directly linked to the Meroitic divine kingship and to a ritual, religious, and apotropaic sphere, too.

When my work on the glazed terracotta tiles started, as the subject of my research and thesis for the post-graduate school in archaeology in Venice, there was a very confused situation with hundreds of fragments mixed up together in baskets (the Sudanese *gufas*), or in plastic bags, that were somewhat badly preserved and hardly recognisable. Nevertheless, many of them can be easily associated to some well-preserved specimens, already published by L. Sist (2000, 254-5; 2006b, 476-7), and four types of tiles were documented according to the iconography, that is type A (figurative), B (vegetal), C (geometric), and D (symbolic). Furthermore, the approximate place of discovery was identified thanks to the journal of the previous campaigns. As it is shown on the map of the archaeological area (Fig. 1), the red spots point out the squares of the virtual grid where the glazed tiles were uncovered, exactly along the outer perimetral wall and inside the inner peristyle of palace B1500.

This paper will introduce the most significant samples and fragments of these tiles and they will be compared with the specimens already published and with other objects representing similar iconographies and themes.

[1] Since the last season in November and December 2017, some samples of fragments of tiles, along with painted plasters from the palace, have been undergoing chemical analyses in order to clarify the exact composition of glaze and fabric. Analyses are carried out by the Chemistry Department of Faculty of Science at Khartoum University (Professor Abdalla Ahmed Elbashir).

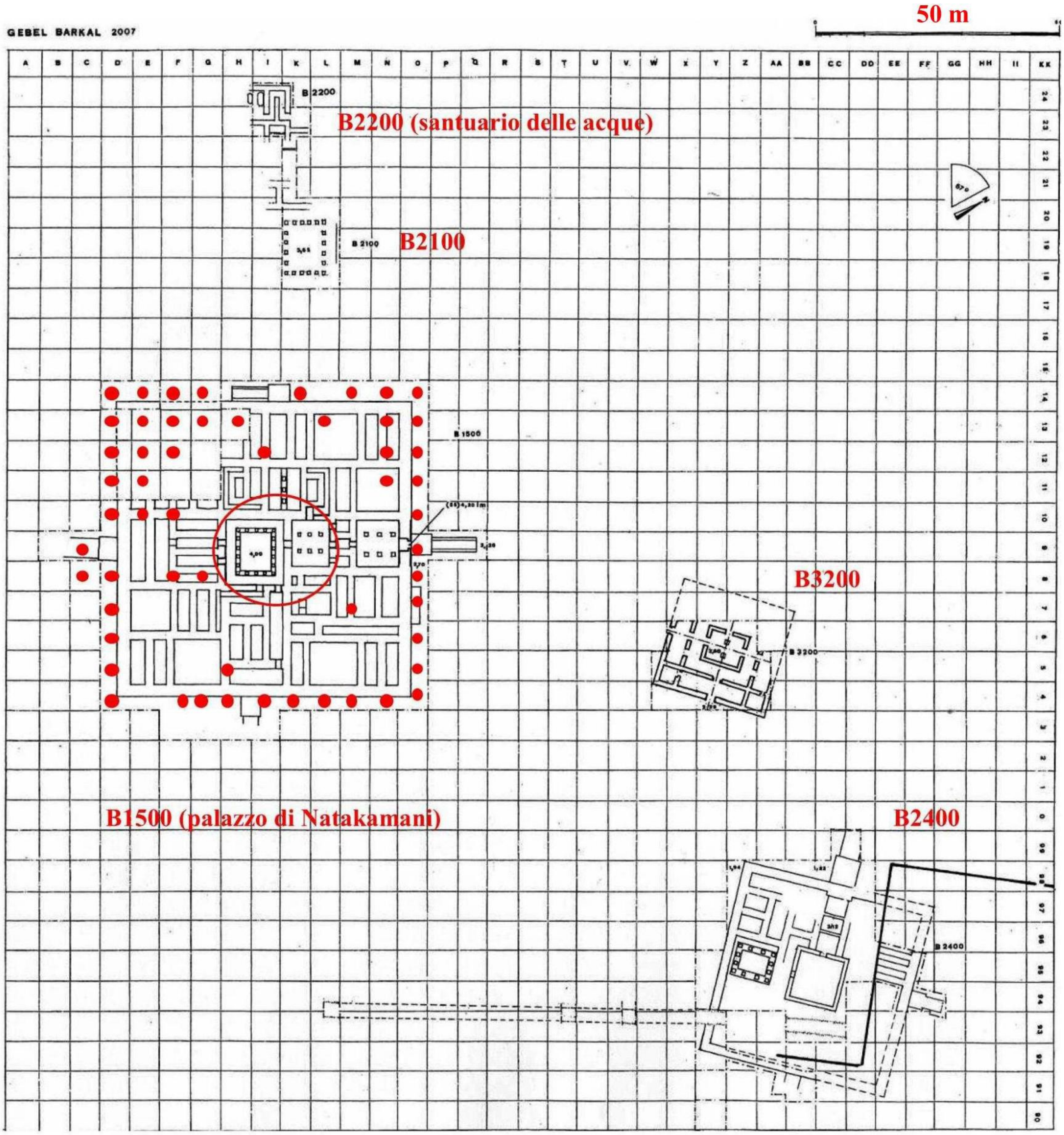

Figure 1. Meroitic royal district at Jebel Barkal (Italian Archaeological Mission in Sudan - Università Ca' Foscari, Venice).

Dionysiac and lion-shaped tiles

Among the tiles that decorated the outer perimetral walls of the palace, the first ones are a sort of *imagines clipeatae*, that is round tiles with a thickness of about 2 cm and of about 30 cm in diameter. These tiles usually portray female human busts in frontal view, made up in high-relief that jut from the background, in a clear Hellenistic style, as suggested by hairstyles with long ringlets kept together by a typical classical *taenia* band, and a draped tunic or chiton. The few complete examples already published show these women depicted in different poses (Fig. 2), such as looking up in an apotheosis attitude (a), holding bunches of grapes (b), or dancing with an arm raised over the head (c). These are Dionysiac motifs and probably point to the usual iconography of the maenads of the Dionysiac *thíasos*. As all the Greek and classical influences, their presence in Meroitic art and culture dates back to the 3rd century BCE, when peaceful diplomatic contacts and trade exchanges between Meroe and Ptolemaic Egypt were carried out in lower Nubia or Dodekaschoinos (Burstein 1993; Sist 1999a, 2006a; Török 2006). A peculiar figure is a woman who holds her breast (d), clearly linked to fertility and perhaps to the goddess Isis as divine and royal mother. It is known that Isis has an important role in the Meroitic pantheon and a connection to Dionysus, as it will be discussed soon.

Figure 2. Round tiles with Dionysiac motifs (from left to right: Sist 200, Tav. XVII, Fig. 1; Roccati 2012, 255, Fig. 10; Baud 2010, 204, Figs. 267-8; photo G. Lovera; Sist 2000, Tav. XVIII, Figs. 5-6).

Some of the fragments examined in my study are pertinent to the above-mentioned specimens, such as parts of the round edges with the wall plaster still adherent to them, a fragment of a human bust and parts of draped tunics (Fig. 3), busts and arms that hold bunches of grapes (Fig. 4), arms of dancing maenads and classical hairstyles with *taenia* bands (Fig. 5), fragmentary faces (Fig. 6). However, during the sampling, among the hardly recognisable fragments, one of them is pertinent to a round tile showing the left part of a human bust, the left hand holding an unclear elongated item, perhaps a stick or a scepter (Fig. 6). The lack of comparisons amongst the other examples currently prevents any definite interpretation of the subject.

Figure 3. Fragments of a round edge of a tile, of draped tunics, and part of a human bust (photo A. Salvador 2014).

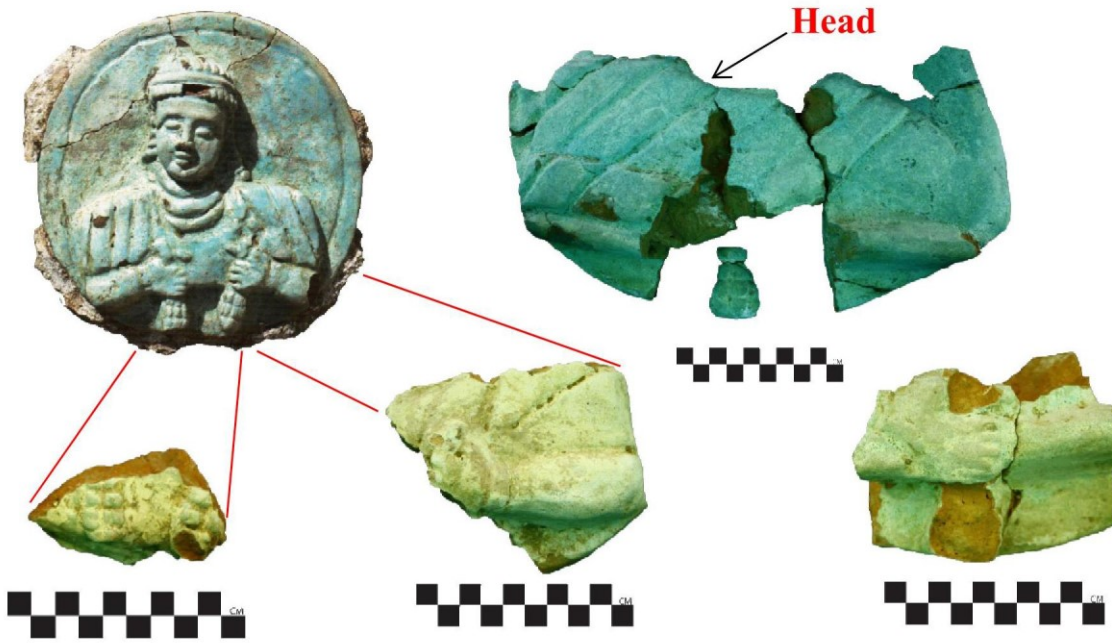

Figure 4. Busts and arms holding bunches of grapes (photo A. Salvador 2014).

Figure 5. Arms of dancing maenads and classical hairstyles with *taenia* bands (photo A. Salvador 2014).

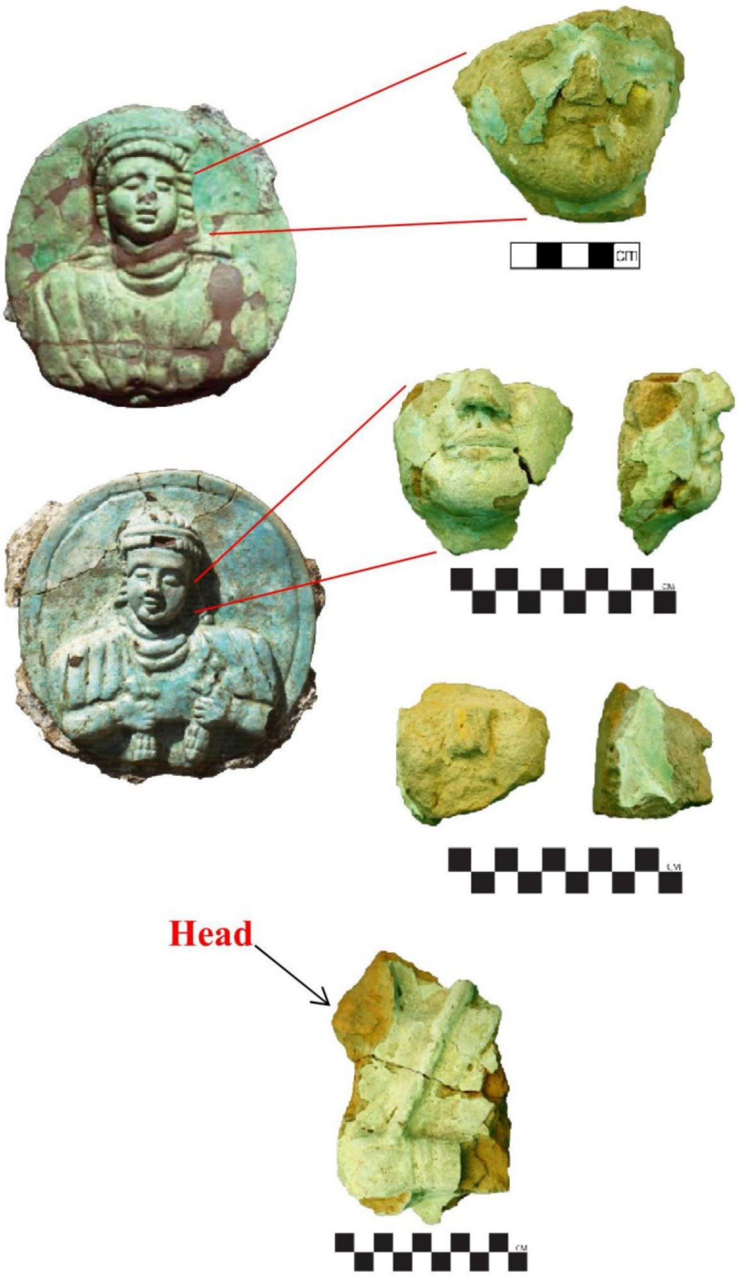

Figure 6. Fragmentary faces and Part of a human bust with the left hand holding an unclear elongated item (photo A. Salvador 2014).

The second type of figurative tiles has a peculiar shape. It is the outline of a lion in frontal view standing on a curved elongated element, certainly a lunar crescent. The animal has the typical mane and the Egyptian *hmhm* crown, made up of a triple *atef* crown between two cobra *uraei* which stand on ram-horns (Fig. 7). This lion depicts Apedemak, the prominent god of the Meroitic pantheon linked to the Meroitic kingship.

The crown is characteristic of Apedemak (Zabkar 1975, 102-5; Török 1987, 15-16), as he wears it in the reliefs depicting him on the walls of the Lion Temples at Mussawarat es-Sufra (3rd century BCE) and Naqa (1st century CE), as well (Fig. 8). Just one complete example survived from the previous excavations of Italian Mission in the palace of Natakamani, besides the sporadic find of a clay mold discovered at the base of the Jebel Barkal in 2005 (Roccati 2011, 67). This suggests that the glazed terracotta tiles from palace B1500 were possibly a mass-production with molds, maybe produced in a local workshop. Many fragments are pertinent to this type, like parts of the *hmhm* crown, of the crescent, and the paws on it. Just in one case the lower part of the lion with part of the mane and almost the whole crescent are preserved (Fig. 7).

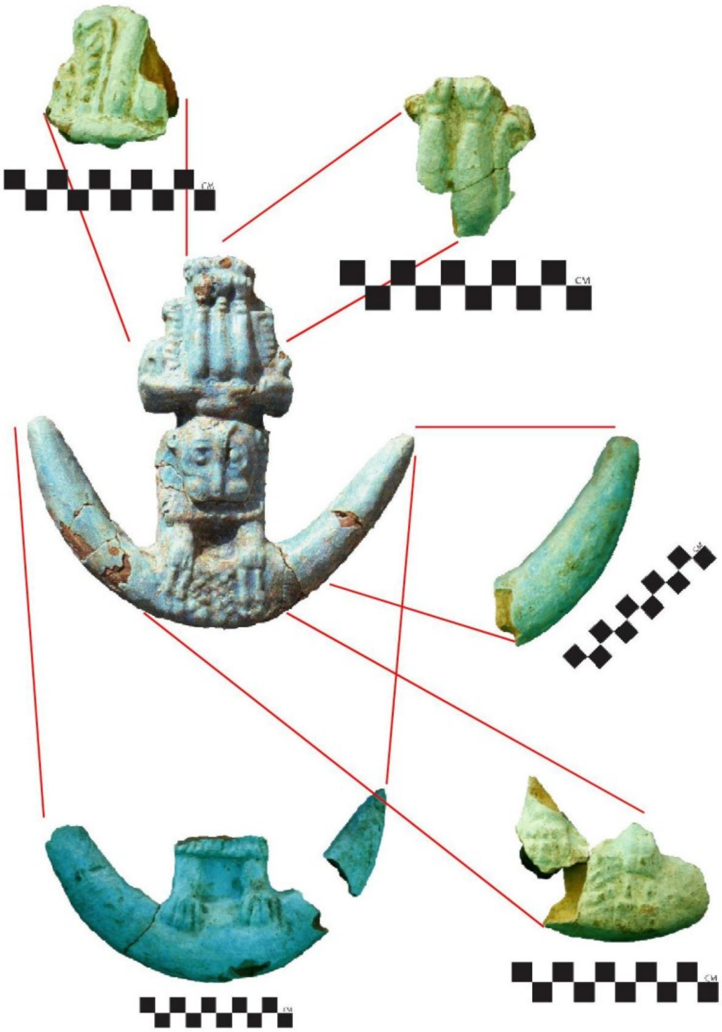

Figure 7. Tile in the shape of a lion on the crescent from Palace B1500 at Jebel Barkal (Baud 2010, 96, Fig. 111) and fragments pertinent to it (photo A. Salvador 2014).

Figure 8. Reliefs depicting Apedemak from the southern wall of the temple at Mussawarat es-Sufra (left) and from the southern wall of the Lion Temple at Naqa (right) (photo S. Taurino 2014).

But why is a Dionysiac theme joined to the Meroitic lion-god Apedemak? It is worth to consider both the gods and their role apart to understand this peculiar combination in the glazed decorations of palace B1500 at Jebel Barkal and in Meroitic culture in general.

In Graeco-Roman world, Dionysus is chiefly the god of wine and grapevine. Then, he is the god of vegetation, of the cyclic regeneration of nature performed by seasons. He protects the animals, as well as the lion, as it is written in the *Homeric hymn to Dionysus* and in the Euripides' *Bacchae*. He is associated to the underworld, as the practice of libation in funerary contexts through red-figured pottery in Greek burials suggests (Seaford 2006, 15-18, 22-25, 78-81). Moreover, in Ptolemaic Egypt Dionysus is one of the patron gods of the Ptolemies along with Herakles (Dunand and Zivie-Coche 2003, 269; Seaford 2006, 37-38, 57-58), as well as Apedemak is the patron god of the Meroitic royalty in contemporary Kush. Anyway, we still know little about the Meroitic lion-god, except for being a warrior god who usually wields bow and arrows (Wilkinson 2003, 176-7; Zabkar 1975, 13-17).

But the kingship does not solve wholly the issue about Dionysus and Apedemak. It has to be considered the role and mediation of another deity, that is the Egyptian Osiris. For the *interpretatio graeca*, from Herodotus in his *Histories (book II)* to Plutarch in his *De Iside et Osiride*, Dionysus was assimilated to Osiris as they share the fact to be deities of the underworld and associated to regeneration of nature, vegetation and fertility, too (Dunand and Zivie-Coche 2003, 266; Seaford 2006, 72-73). On the other side, Apedemak substitutes Osiris in the Merotic divine triad next to Isis and Horus (Zabkar 1975, 17-21), as they are depicted on the reliefs of the Lion Temple at Naqa which was built by Natakamani, the same king for whom palace B1500 at Jebel Barkal and its glazed terracotta tiles were made. Moreover, the Kushite culture assimilated the Dionisyac worship with the mediation of Ptolemaic Egypt (Baud 2010, 202-7; Manzo 2006), as suggested by several amphorae and wine-jars for funerary libations placed in many noble burials, or the two small bronze heads of Dionysus discovered in the pyramid Beg. 5 at Meroe which belongs to *paqar* Arikankharor, son of the royal couple Natakamani and Amanitore.

Meroe is the place where comparisons of the combination of Dionysus and Apedemak in the glazed terracotta tiles of palace B1500 can be found. Here, a peculiar building lies along the western wall of the Royal City, the so-called *Royal Baths* or building M195, built and decorated between the late 3rd century BCE and the beginning of the 1st century CE (Baud 2010, 97-98; Török 1997a, 63-91; 2011, 139-88). The centrepiece is a square water basin of about 7 x 7 m and a depth of about 2.5 m which was surrounded by a garden. Shallow steps on the eastern side lead down to the basin and a water inlet system of channels is on the southern side. The upper part of the southern wall of the basin has an articulated decoration concerning Dionysus and Apedemak (Fig. 9). As a matter of fact, Dionysiac sculptures, representing Dionysus itself, musicians, satyrs, and two banqueters on *klìnai*, are shown with crouched statues and protomes of the lion Apedemak. Moreover, glazed terracotta tiles in the shape of the lion on the crescent and the female bust of a maenad set into the wall plaster are almost identical to those ones of the palace of Natakamani at Jebel Barkal. So, it can be argued that the so-called *Royal Baths* are indeed a water-sanctuary where were performed rituals linked to water and wine, to abundance and fertility, perhaps to Nile floods and the New Year and, finally, to renovation of nature and Meroitic kingship.

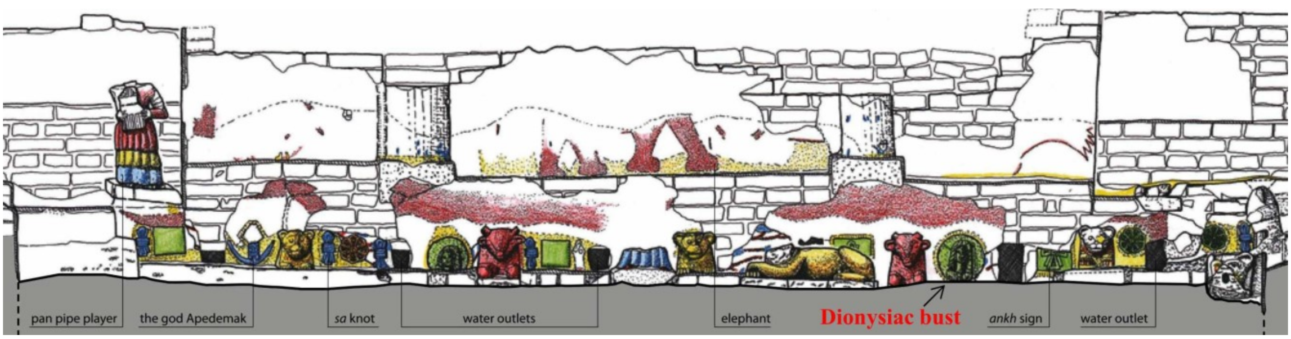

Figure 9. The southern wall of the basin of the *Royal Baths* at Meroe (Wolf, S. and Onasch, H.-U. 2016, 9-10, Fig. 13).

Now, the palace B1500 is a royal ceremonial building directly linked to the regeneration of kingship, probably part of the coronation journey which concerned the most important sanctuaries and cities of the kingdom, as the ancient capital Napata (Török 1995, 65-73; 1997b, 220-1). Here, the Dionysiac and lion-shaped tiles were conceived to be virtually linked to the concepts above-mentioned, as it is known that the local temple of Amun of Napata had been associated to Nile flood cult, New Year and renovation of kingship since 25th dynasty through Meroitic time (Török 2002, 13-16), when building B2200 was built west of the palace B1500 (Novella Sordi 2005; Ciampini and Bakowska-Czerner 2014). This is probably a sort of water-sanctuary where Nile flood and royal renovation rituals were performed in relation with the palace of Natakamani. Though the *Royal Baths* and B2200 are quite different in plan and construction, as the latter is made by two sandstone elliptical tubs and an S-shaped corridor which probably reproduces the Nile stream, they represent a close connection between Meroe and Napata as royal cities, and centres of royal renovation rituals in which the lion-god Apedemak and Dionysiac figures played a significant role.

sꜣ sign tiles

The other type of glazed terracotta tiles from palace B1500 at Jebel Barkal deals with the *sꜣ* sign or knot which has an apotropaic, magic, and protective function towards the king in a ceremonial context. This symbol results from the Egyptian hieroglyph  which depicts a rolled-up temporary shelter made of matting for shepherds. Its Meroitic variant is peculiar, because it is a sort of 8-shaped element with a knot in the middle that is more similar to an *ʿnḫ* sign than to the original symbol, or a combination of both (Török 1997a, 84). On the contrary, according to P. Shinnie and J. R. Anderson (2004, 242), who excavated the site of Meroe from 1965 to 1984, the Meroitic magic *sꜣ* has its origin in the *tit* knot of Isis, goddess of magic, spouse of Osiris, and one of the most important deities in Meroitic culture, therefore linked to Dionysus and Apedemak, as just discussed. The *sꜣ* sign is so frequent and popular in Meroitic art that it is found at Meroe in the 1st-2nd centuries CE on pottery as decoration, protective and magic amulet, and in stone architectural palatine decorations, as on a sandstone block frieze from Palace M750 at Meroe (Baud 2010, 65, Fig. 62). It seems to be a peculiar feature of the eclectic art of the period of Natakamani, as it appears not only on the glazed tiles of palace B1500. In fact, the *sꜣ* sign is in the reliefs of the south wall of the Lion Temple at Naqa as emanation from the divine sceptres towards the royal family and a triple winged *sꜣ* sign is depicted on the western lintel of the *Roman Kiosk* at Naqa, as well (Fig. 10). Furthermore, it had been already used in pharaonic Egypt as magic symbol of protection in royal contexts, as in the wall-paintings of the bedroom of Amenhotep III in the palace of Malqata, which alternates with *ʿnḫ* signs.

Figure 10. The lintel of the western gate of the *Roman Kiosk* at Naqa (photo S. Taurino 2014).

During my research in 2014, several fragments analysed refer to the type of the rosette with eight petals, a motif of near-eastern origin, with *sꜣ* knots in the petals that lie radially around the centre of the flower (Fig. 11). Just a complete example survived and was published by L. Sist. The diameter is about 30 cm and the thickness about 2 cm, like the round tiles with Dionysiac female busts. On the other side, many fragments are pertinent to a tile in the shape of a all-round *sꜣ* knot, not more 30 cm long, which have not any comparisons with the glazed tiles from Jebel Barkal already published (Fig. 12). Thanks to the 2014 sampling, it is clear that these are pertinent to the upper rounded part, the lower triangular part, often with two incised lines at the base, and the central knot of the apotropaic symbol. It is remarkable that close comparisons are found again in the decoration of the southern wall of the *Royal Baths* in Meroe which dates back shortly before the palace of Natakamani at Jebel Barkal. Here, the glazed terracotta tiles show either Dionisyac busts and the lion Apedemak on the crescent, as seen before. Moreover, the rosette with *sꜣ* sign in petals and the all-round *sꜣ* sign are the same, too (Fig. 9). In the case of the all-round sign, the Jebel Barkal version has three parallel strips as central knot, while original version from Meroe has four. Thus, it can be argued that *in situ* glazed tiles from the *Royal Baths* in Meroe could be the models for the tiles that decorated the perimetral walls of palace B1500 at Jebel Barkal. Only the square tile with what appears to be an *ʿnḫ* sign in low-relief from the *Royal Baths* in Meroe does not have any parallels in Jebel Barkal samples, so far (Fig. 9).

Figure 11. Tile in the shape of a rosette with *sꜣ* signs in petals from Palace B1500 at Jebel Barkal (photo G. Lovera) and fragments pertinent to it (photo A. Salvador 2014).

Figure 12. Tile in the shape of an all-round *s3* sign from Meroe and fragments pertinent to it from Palace B1500 at Jebel Barkal (photo A. Salvador 2014).

Low-relief tiles

The last type of glazed tiles from palace B1500 are square, decorated in low-relief, and are about 1 cm in thickness. They probably adorned the walls of the main inner sector of the building, that is the double-floored peristyle with Hellenistic-fashioned columns. Just two fragmented examples were published by S. Donadoni (Fig. 13). The first one pictures the upper part of a male human figure depicted with a genuine Egyptian style of the human body (Donadoni 1989, with no references in the text). The face is in side view and the eye and trunk are in frontal view. The man has a long tripartite hairstyle or headcloth in side view that falls on the shoulders. It resembles the Egyptian *nemes* with a *uraeus* on the forehead, although the tile is such fragmentary not to allow us an accurate interpretation of the iconography. The second piece is a square tile of 19 x 19 cm made by eight fragments rearranged together (Donadoni 1988). The *recto* has a low-relief decoration in Hellenistc style of a female human head in frontal view with a long hairstyle, or a shroud that falls on the shoulders. It is inside a rounded frame, resembling the Dionysiac round tiles, and stands on an elongated curved item similar to the crescent of the lion-shaped tiles. The woman wears a draped cloak tied to the neck. It can be compared to a fragment of a round tile decorated with a virtual similar iconography, as it is just preserved the tie of the cloak (Fig. 13). Also, in this case the motif is hardly recognisable, though it can be linked to a Dionisyac theme in general. Anyhow, it is singular that the *verso* of the tile has an incised decoration that seems a king that wears a *shendyt* kilt spearing an enemy or an animal. It is odd that this theme is on the side of the tile set into the wall plaster, keeping in mind that the engraving had been made before the baking of the tile, and has probably a sole magic and apotropaic function inside a royal ceremonial context.

Figure 13. Fragments of square tiles decorated in low-relief from Palace B1500 at Jebel Barkal (left, Donadoni 1989, Fig. 4; middle, 1988, 365-6, figs. 1-2), and a fragment pertinent to a round tile (right, photo A. Salvador 2014).

A lot of fragments sampled in 2014 are pertinent to this type of glazed tiles, but their bad state of preservation prevents an accurate understanding of themes (Fig. 14). Indeed, we observe human legs (a), human heads in side view and one in frontal view (b), what seems to be a bent arm (c), a hand grasping an elongated item (d), perhaps a stick or a sceptre, part of a lion with the mane (e), maybe linked to Apedemak, the end of a wing (f), part of a plant (g), and the lower part of an unrecognisable animal (h). Amongst the human heads, three are in side view and one in frontal view, one of the formers with a typical Meroitic short cap hairstyle and the latter depicted in a evident Hellenistic style with a short hairstyle and wearing a draped dress. Only in one instance it is possible a comparison with other decorations, so far. One of the three tiles with human heads in side view depicts the face of a man with a peculiar hairstyle or a headdress made by vertical elements, perhaps feathers, kept by a band on the forehead. A close parallel is on a Meroitic sandstone throne base which stood on the sand in front of the local museum at Jebel Barkal in 2014 (Fig. 15).

It is decorated with a royal ritual theme of pharaonic origin. One side of the base is engraved with a rapacious which claws grasp a rope tying kneeling prisoners. Their ethnicity is clearly denoted by their different hairstyles and headdresses. This is a classical royal scene of the victory of the king on his enemies who are subdued. The first prisoner on the right wears a similar hairstyle or headcloth of the human head on the piece in question. Thus, I suppose that the human head with the feathered headdress is pertinent to a foreign prisoner and the whole original scene could refer to the enemies of the kingdom captured by the king, or for him. But the poor state of preservation of all the fragments so far analysed prevents us to understand if each tile was intended as a single scene, or represents a part of a coherent frieze of several tiles that adorned to a certain height the walls of the inner peristyle sector of the palace of Natakamani at Jebel Barkal.

Other poorly preserved fragments examined in 2014 are related to iconographies completely different from the types so far discussed and still they are worth to be mentioned for their peculiar, although fragmentary motifs and style (Fig. 16). One tile seems to be triangular in shape with a frieze of *uraei* at the top and a sun disk between two *uraei* below. Another piece, instead, is pertinent to a square tile geometrically and linearly decorated. A notched edge frames a space split by an incised diagonal line: a half has a decoration with parallel lines slightly inclined, whilst the other half has a net, or a grid motif.

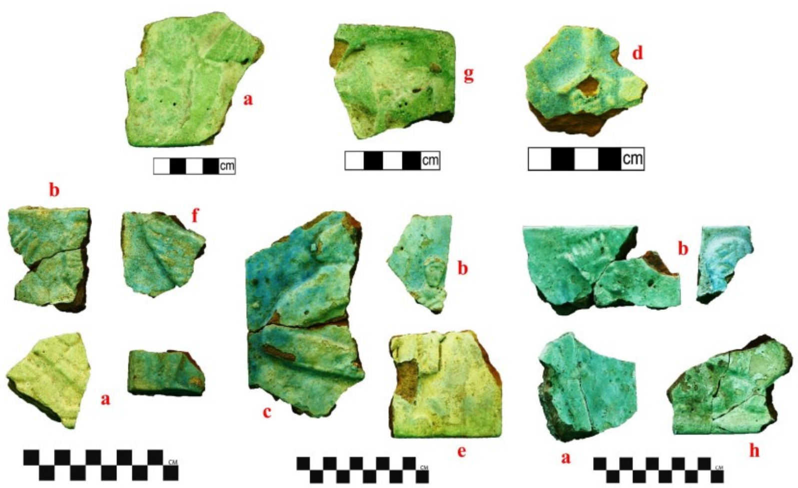

Figure 14. Fragments of square tiles decorated in low-relief (photo A. Salvador 2014).

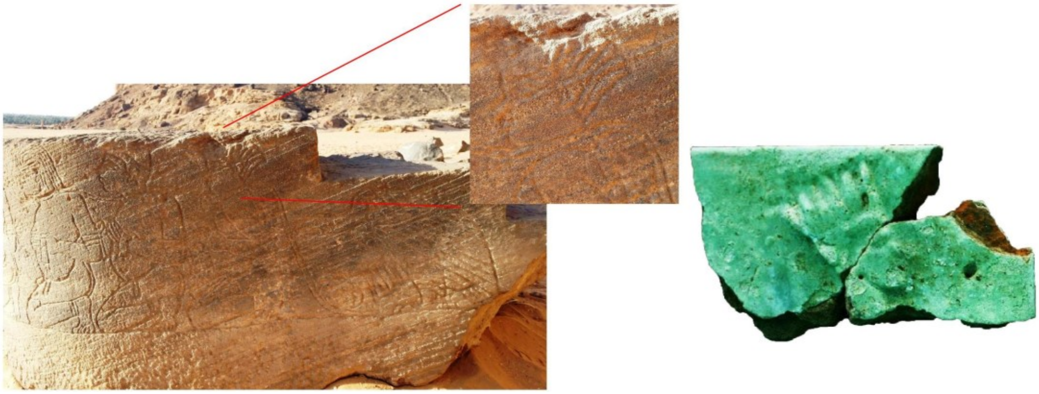

Figure 15. Comparison between the decoration of a Meroitic sandstone throne base (left, photo S. Taurino 2014) and that of one of the fragments of square tiles from Jebel Barkal (right, photo A. Salvador 2014).

Figure 16. Fragments of tiles decorated with peculiar motifs: a sun disk between two *uraei* surmounted by a frieze of *uraei* (left) and a geometrical and linear motif (right) (photo A. Salvador 2014).

Conclusion

The glazed terracotta tiles from the palace of Natakamani at Jebel Barkal play a significant role in the study and comprehension of Meroitic culture and art in the 1st century CE. According to the already published pieces and the sampling carried out in 2014, they testify eclecticism and innovation in Kushite art, especially during the rule of Natakamani and Amanitore, who built monuments from Amara to Meroe (Baud 2010, 74-75; Török 1997b, 461-7). At that time, culture, art and economy lively flourished after the conflict between Meroe and Rome for the supremacy in the buffer zone of Dodekaschoinos from 25 to 21 CE, when Augustus and Amanirenas subscribed a treaty in Samos (Baud 2010, 73; Sist 1999b, 140; Török 1997b, 448-55).

Through the decorative program of palace B1500, we can observe the combination of forms and themes of Egyptian, Hellenistic and Ptolemaic origin with the local substrate to fit to peculiar ideologies of Meroitic religion and divine kingship. The concept of royal regeneration is expressed by round tiles with Dionysiac busts next to the lion Apedemak on the crescent, connected to each other by the mediation of the Egyptian god Osiris, and the apotropaic *s3* sign tiles which were inserted in the outer perimetral walls of the royal building. A similar earlier decoration can be found in the *Royal Baths* in Meroe and the fact that there was also a water sanctuary at Jebel Barkal, that is building B2200 near palace B1500, establishes a link between the two capitals, Napata and Meroe, as ceremonial centres for the cult of Nile flood, fertility, and royal renovation. This exclusive connection is also astonishing if we consider that other palaces as Mouweis (Maillot 2008; 2013; 2014) and Wad ben Naqa (Vercoutter 1962) probably were not adorned with similar glazed tiles. On the other side, the square tiles from the central peristyle of the palace are too fragmentary to identify a precise theme or motif, although it can be supposed just in the case of the human face in side view with a feathered headdress. However, their low-relief decorations are suitable for an inner room in half-light, unlike the rounded, lion-shaped, and *s3* sign tiles which have a high-relief and heavily jutting decoration 0fitting with the effect of light and shade on the outer walls due to the intensive sun light (Donadoni 1988, 364) (Fig. 17).

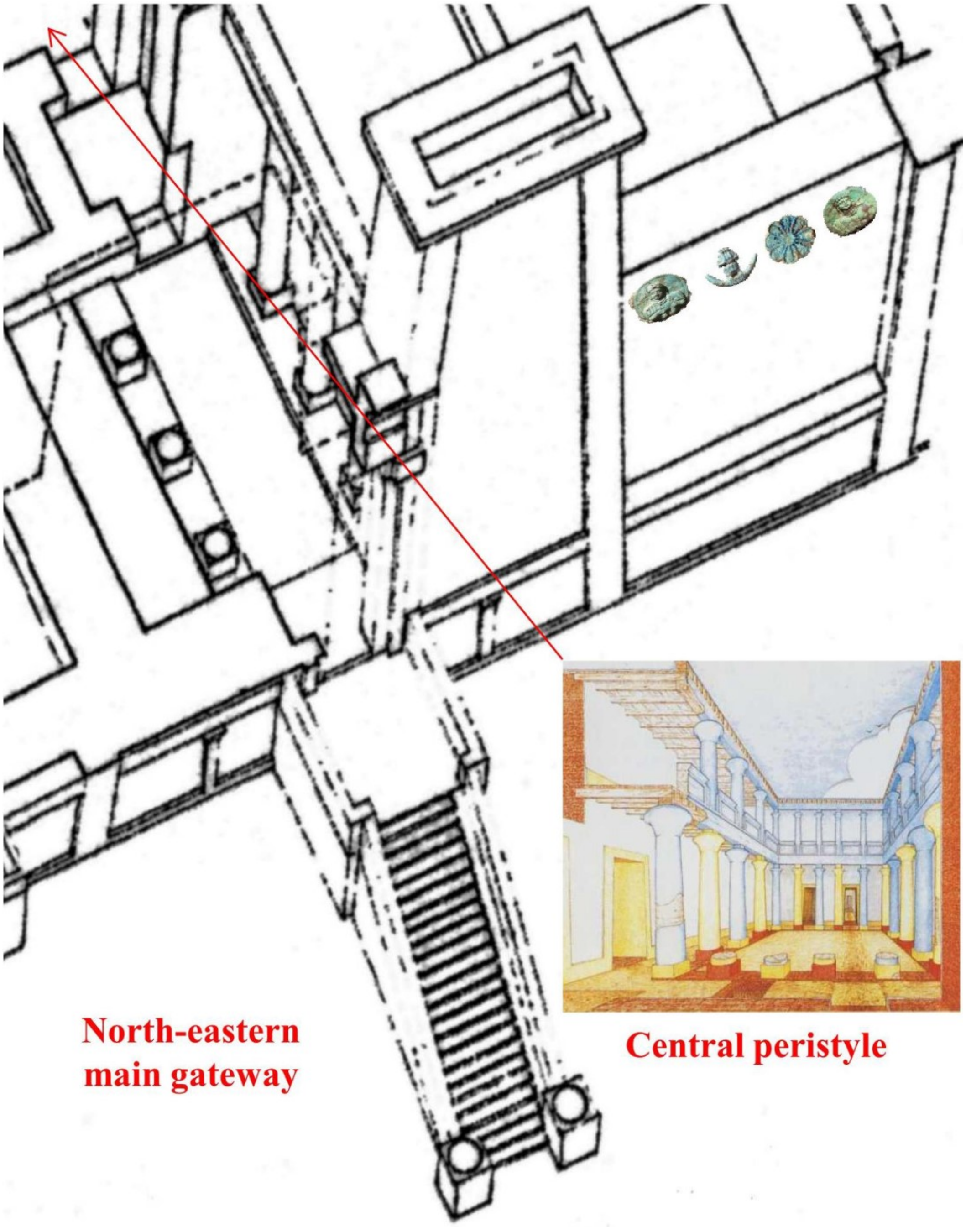

Figure 17. Reconstruction of part of Palace B1500 at Jebel Barkal (Barberini 2010) and presumable position of some of the glazed tiles on its outer perimetral wall.

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Egyptian metrics: a morphological approach

Stefano Vittori

Introduction

Metrics is substantially related to isochrony, a branch of supra-segmental linguistics which studies the way speakers rhythmically scan the enunciation, according to stress, syllable and *mora* (a very good synthesis and rich bibliography in Patel 2008).

In stress-timed languages like English, the length of a syllable is determined by the stress: a stressed syllable is long, an unstressed one is short. In syllable-timed languages like Italian, the syllable is the unit and hence it tends to be constant in duration. Finally, in *mora*-timed languages like Japanese, the length of a syllable is determined by its typology: an open syllable is short, a closed one is long.

If we take a look to three examples taken from each rhythmic class, and if we compare the very similar amount of metric units in the respective systems of measurement, we can have an idea of to which degree pertaining to one rather than to another rhythmic class affects the poetic forms of a language.

I lóked on my left hálf as þe lády me táughte
And was wár of a wóman wórþeliy clóþed. METRIC UNITS: 8
(W. Langland, Piers Ploughman)

Padron, mi trema il core. METRIC UNITS: 7
(L. Da Ponte, Don Giovanni, Atto II, Sc. 15)

Kyō natsukashi ya. METRIC UNITS: 7
(M. Bashō, Haiku, 54, 2),

A short history of studies

Three are the most important theories on Egyptian metrics: Gerhard Fecht's, John Foster's and Bernard Mathieu's. All three define ancient Egyptian stress-timed, an approach already suggested by Vikentiev (1935) and basically inspired by the stress-timed nature of Coptic.

According to Fecht (1963, 54-96; 1964, 11-63), followed by von Beckerath (1968), Barta (1969), Shirun Grumach (1979) (with some variation in the rules), Patanè (1982, 1983, and 1987), and Assmann (1983), an Egyptian verse is a whole-sensed sentence containing two, three or four *cola* (sections of enunciation governed by a stress) combined with other similar sentences in sequences of stanzas.

According to Foster (1975, 1980, 1988), followed, at least in the basic principles, by Burkard (1983), there is no constant number of metric units. Each poetic idea is split into one couplet, and the elements of each verse of this couplet somehow echo one another in a syntactic, morphologic, or semantic way. This approach has some similarities with the end-stopped line theorised by Lichtheim (1971).

Mathieu (1988, 1990, 1994, 1997) thinks that Egyptian verses are organised in couplets and triplets where the preceding verse contains always one more stress than the following one. There are three schemes: "heptametric distich" (4+3), "enneametric distich" (5+4), and "enneametric tristich" (4+3+2).

The shared point of these approaches is the perfect equivalence between syntax and metrics. A stress-based analysis is substantially a syntax-based one: the laws according to which syntax governs stress are known as "prosody". The problem with these approaches is that the prosody of a dead language is no longer verifiable. There are, however, at least other two problematic points with these approaches.

The first problematic point is that in complex systems like languages, each slot (syntax, phonology, morphology, etc.) undergoes dramatic diachronic changes; moreover, it is interlaced with the others: none of these slots can move without possibly moving the others. Rhythm is one of these slots and, as such, it has three possible behaviours in two different situations: 1) it changes on its own, possibly causing changes in the other slots; 2) the other slots change, but its old configuration is still compatible with the new situation, so that it remains unchanged; 3) the others change, and its old configuration is no longer compatible with the new situation, so that it changes too. Egyptian could possibly have remained in the same rhythmic class for 2000 years; it is also possible that it travelled through all the three rhythmic classes. In this latter scenario, it is also possible that it was going through the same class during these two stages corresponding to middle Egyptian and Coptic: but these are possibilities to be verified through research, and not assumptions on which a research can be based. Latin, for example, changed its rhythmic class more than once during its existence:

I|n| no|va| fe|r|t a|ni|mu|s| mu||ta||ta|s| di||ce|re| fo|r|ma|s|
co|r|po|ra|: di||, co|ep|ti|s|, na|m| vo|s| mu||ta|s|ti|s e|t i|l|la|s|,
a|d|spi||ra||te| me|i|s| pri||ma||que a|b o|ri||gi|ne| mu|n|di||
a|d| me|a| pe|r|pe|tu|u|m| de||du||ci|te| te|m|po|ra| ca|r|me|n|.
Ovid, Met., I, 1-4. Number of *morae* per verse: 24. I c. CE.

Áve María,
grátia pléna,
dóminus técum.
Benedícta tú in muliéribus
et benedíctus frúctus véntris túi Iésus.
Sáncta María,
máter Déi,
óra pro nóbis peccatóribus
núnc et in hóra mórtis nóstrae. Ámen.
Ave Maria. Number of stresses per verse in each strophe (two quatrains plus the title-verse): (2+)2+2+3+5. IV c. CE.

Nel| mez|zo| del| cam|min| di| nos|tra| vi|ta|
Mi| ri|tro|vai| pe|r u|na| sel|va os|cu|ra|,
ché| la| di|rit|ta| vi|a e|ra s|mar|ri|ta|.
D. Alighieri, Inf., I, 1-3. Number of syllables per verse: 11. XIV c. CE.

The second problematic point is that a constant amount of grammatical stresses does not grant for a stress-based meter. For example, in classic Latin hexameters, there is a strong regularity in number of grammatical stresses, five per verse:

In nóva fert ánimus mutátas dícere fórmas*
córpora: dí, coéptis, nam vos mutástis et íllas
adspiráte méis primáque ab orígine múndi
ad méa perpétuum dedúcite témpora cármen.
*Ante** máre et térras et quod tégit ómnia cáelum*
*Únus erat*** tóto natúrae vúltus in órbe*
Quem dixére cháos: rúdis indigestáque móles
Nec quícquam nisi póndus íners congestáque eódem
Non béne iunctárum discórdia sémina rérum.
Ovid, Met., I, 1-9.

*Monosyllabic words, unless they are followed by a comma, a period, and the like, cannot bear any stress: they are proclitic or enclitic.

**As for the proclitic nature of all the prepositions, polysyllabic ones included, cp. Prisc., Part., 468-469 K., 18-21: '*quando, mutato ordine, postponuntur, et mutant accentum, ut te propter, eundem propter: hic paenultimum acutum habet accentum, quod si praeponeretur, sine dubio gravaretur*'.

***As for the unstressed nature of the verb "to be", always proclitic or enclitic to the predicate, cp. the anomalous evolution it had in Italian: from ĔRĂT, one would have expected *iera (*['jɛra]).

Of course, it is necessary to count the stresses in order to individuate the verse ends. But, once again, if one defined "stress-timed" these verses of Ovid on the basis of the fact that they contain always five stresses, one would be basing on syntactic data, and hence his conjectures would have just as much chances to be correct and to be wrong – in Ovid's case, they would be completely wrong. There is, however, a layer of the language where one can still verify his hypotheses; and this layer is morphology.

Bases of the morphological approach

There are two premises to be based on: 1) as an Afro-Asiatic language, Egyptian is intro-flexed: consonants ("radicals") are semantic and vowels morphologic; 2) when a weak radical is intervocalic, it falls away; and the two short vowels formerly separated by it merge becoming one long vowel; cp. Arabic *kawana > *kaana > kāna, "he was". As a result, the number of strong radicals tells that of the syllables (kāna = k, n = 2); while that of all the radicals tells that of the *morae* (kāna = k, w, n = 3). Hence, if there is a series of sentences in which only the strong radicals are constant in number, the metrics is syllable-timed; if the number of all the radicals is constant, the metrics is *mora*-timed. If both are not constant, the metrics is stress-timed.

As a first step, I apply this method to a text I can check, like Ovid's verses we already saw,

In nova fert animus mutatas dicere formas
corpora: di, coeptis, nam vos mutastis et illas,
adspirate meis, primaque ab origine mundi
ad mea perpetuum deducite tempora carmen.

This is what it would look like in hieroglyphs:

i͗n nw fr=t i͗nm.s mt.t.s dk.r frm.s
krpr: dj, kp.t.s, nm ws mt=sts i͗t i͗ls,
i͗d-spr=t mi͗.s pr.m-k^{w} *i͗b i͗r.gn mnd*
i͗d mi͗ pr.pt.m d-dk=t tmpr kr.mn.

Each of these verses contains 24 *morae*. There is an inconstant number of strong radicals: 22, 24, 23, 21. There are, however, many weak radicals: *mūtāre* has a concave root, *mwt*: in hieroglyphs, one would simply write it <mt>, as in "to die". After the introduction of the weak radicals, a confrontation with the derived languages becomes necessary. For example, since in all the derivatives of *spjr* and *prj.m-* the first radical is vowelless (*respirare*, *respirar*, *respirer*…; *primo*, *primero*, *prémier*…), it was in grade 0 *ab antiquo*. Hence, it leans on the *mora* of the following consonant. That the thematic morph <.a.> and the accusative morph <.s> are vowelless, it is clear from Spanish -as. Finally, the initial 'glottal stops' (in Egyptian, the initial <j>'s, unless Coptic proves that they are real /j/'s) are actually vocalic beginnings which constitute a *mora* only in the beginning of a sentence.
The final result is consistent in number of units per verse (24):

i͗n nw fr=t (*i͗*)*nm.s mwt.i.t.*[*i͗.s*] *djk.r frm.*[*i͗.s*]
krpr: dj, k[*jp*]*.t.*[*j.s*], *nm w*[*ws*] *mwt.*[*i͗=s*]*ts* (*i͗*)*t* (*i͗*)*ll.*[*i͗.s*]
i͗d-[*sp*]*jr.i͗=t mi͗.*[*j.s*] [*pr*]*j.m.i͗-k*^{w} (*i͗*)*b* (*i͗*)*rj.gn mnd.j*
i͗d mi͗ pr-pti͗.m di͗-dwk=t tmpr krmn,

Application of the method to a middle Egyptian poetic passage

In the passage contained between the cc. 23 and 30 of the Dialogue between a man and his ba preserved in the pBerlin 3024, a papyrus of the times of Amenemhat III (Mathieu 2000, 17; Barbotin 2012, 2), the protagonist speaks about his positive future in the hereafter: ‘Thot will judge me; the gods will be appeased; Khonsu will protect me, the righteous scribe; Ra will listen to my word and the sacred bark will be made stop (in order to let me in); Isdes will protect me in the holy chamber, for my misery is a burden he carried for me. It will be sweet when the gods will drive away the secrets of my belly”:

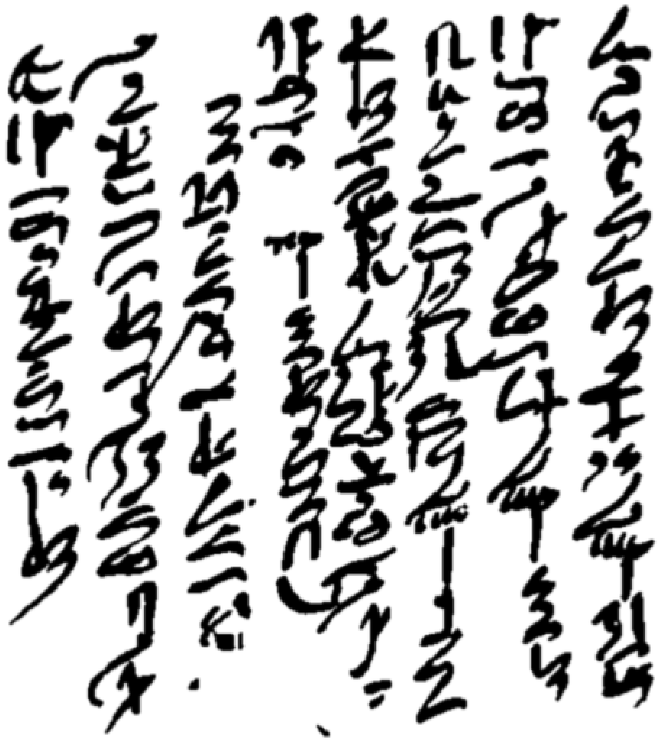

Figure 1. PBerlin 3024, cc. 23-30.

There are always five stresses per verse, three in the main clause, two in the secondary one, so that the presence of a caesura or diaeresis is likely:

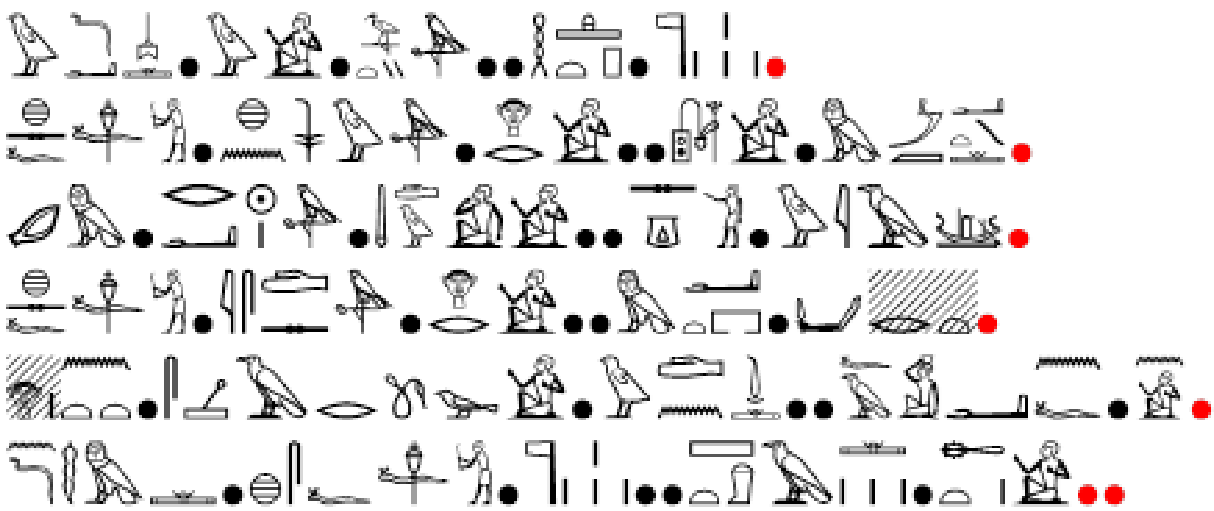

Figure 2. Scansion according to stress.

To verify the presence of other elements beyond the stress, the text should now be analysed from a morphologic viewpoint:

Wḏꜥ wỉ Ḏḥwty; ḥtp nṯr.w;
ẖzf Ḫnsw ḥr=ỉ, zš m mꜣꜥ.t;
sḏm Rꜥ mdw=ỉ; zg<r> wỉꜣ;
ẖzf Ỉsdz ḥr=ỉ m ꜥ.t ḏzr[.t],
[ḥr-]nt(y).t sꜣr=ỉ wdn fꜣ.n=f n=ỉ.
nḏm ẖsf nṯr.w štꜣ.w ẖ.t=ỉ.

All the verses but the third and the fifth show a clear regularity in number of radicals, not only in the final sum (17), but also in the partial one: ten in the first and seven in the second hemistich.

Formulaic elements are of paramount importance for further metrical analysis. For example, two verbal clauses consist of a sequence made of the 3-rad. verb *ẖsf* followed by a subject and the complement *ḥr=ỉ*. The subject is different, but it is both times 4-lit.: *Ḫnsw, Ỉsdz*. In other two cases, a 3-lit. verb is followed by a 4-lit. subject, *nṯr.w*. In general, a first hemistich is made of two 3-lit. words and one 4-lit.; a second hemistich is made of one 3-lit. and one 4-lit. Even where one of the three words of the first hemistich has one less letter, like *wỉ* of the first verse, one of the other two words has one plus letter (*Ḏḥwty* is 5-lit.) and the rule is maintained. In the third verse, where the situation is similar but with the apparently 3-lit. word *mdw=ỉ*, it is sufficient to give back to the 4ae-inf. verb *mdwỉ* its last radical to get the expected number.

As for the verb *zg*, in which Barta (1969, 32) recognizes *sgr*, the causative of *gr*, "to be quiet", hence "zur Ruhe weisen" (1969, 21), a common behaviour of causatives of 2-rad. verbs is that of being 4ae-inf.: *ḥn*, "to equip", caus. *sḥnỉ*, "to provide"; *mn*, "to be firm", caus. *smnỉ*, "to consolidate", *ḏd*, "to say", caus. *sḏdỉ*, "to tell", etc. The causative of *gr* is not an exception, as one can see from its infinitive *sgr.t* (cp. e.g. Tb 149, pKairo CG 24095, 377: *ꜥḥꜥ=f (…) mꜣ=f m wnw.t=f n<.t> sgr.t wẖꜣ{s}*, pLondon BM EA 10477, 107: *ꜥḥꜥ=f (…) r mꜣꜣ=f m wnw.t=f n.t sgr.t ẖꜣwy*, "may he stand (…) and see, when it will be time for him to pacify the darkness"; Tb 178, pLondon BM 9900, 31: *sḥtp.n ṯw nb.w ẖ.wt grḥ pf n sgr.t rmy.wt*, "The lords of offerings pacified you the night the tears are calmed down"). The verse should hence be read like this: *sḏm Rꜥ mdwỉ=ỉ, sgrỉ wỉꜣ*: 10+7=17 radicals.

As for the fifth verse, the *ultima infirma* of *fꜣỉ* is clearly to be restored. Furthermore, in the part in lacuna, the preposition *ḥr* is in *status nominalis*: Gardiner noted in his Grammar (p. 432) that the absence of r in this noun / preposition in the Hieroglyphic spelling corresponds with the lack of its pronunciation in the Coptic correspondent forms, *status absolutus* and *status nominalis*: *ho*, "face", *hi-*, "upon"; while its presence in the *status pronominalis* corresponds to its pronunciation: *(e)hra*=. The timbre [i] of the latter suggests a sonant [r] for the *status nominalis*. Likewise, sonant should be the first radical of *nty* / *nt.t* if one looks at its Coptic correspondent form *et-*: sonant phonemes evolve as vowels in Coptic. Now, a sonant, just like a vowel, does not form a *mora* unless it is at the beginning of a sentence: in all the other cases, it leans on the preceding consonant. If the preceding phoneme is not a consonant but a vowel (or another sonant, like in this case), there is a *synaloepha*, i.e. the following vowel/sonant deletes the preceding one and leans on the consonant on which the one it deleted used to lean. In Ovid, Met. I, 5, one reads: «*Ante mare et terras et, quod tegit omnia, caelum*»: there are two *et*'s: the latter is preceded by a consonant, hence it leans directly on it: *terras-et*, [te][r][ra][a][se][t]; so that the /s/ of *terras* and the /e/ of *et* are in the same *mora*. As for the former, it is preceded by another vowel: in this case, it deletes it and leans on the /r/ on which the /e/ of *mare* used to lean: *ante mar'et*, [a][n][te][ma][re][t]. In the Egyptian verse, /ħ/ is followed by a sonant followed by another sonant: *[ħrnti:t]. The verse is to be read: *ḥr'nt.t sꜣr=ỉ wdn fꜣỉ.n=f n=ỉ*.
The following step is to transform this verses into a metrical scheme, simply considering each consonant as vocalised, apart from the weak ones:

˘ ˘ ˘ ˘ ˘ ˘ ˘ ˘ ˘ ˘ | ˘ ˘ ˘ ˘ ˘ ˘ ˘ || *Weḏeꜥe weỉe Ḏeḥeweteye | ḥetepe neṯerewe ||*

˘ ˘ ˘ ˘ ˘ ˘ ˘ ˘ ˘ ˘ | ˘ ˘ ˘ ˘ ˘ ˘ ˘ || *ẖezefe Ḫenesewe ḥereỉe | zeše me meꜣeꜥete ||*

˘ ˘ ˘ ˘ ˘ ˘ ˘ ¯ ˘ | ˘ ˘ ¯ ˘ ˘ ˘ || *seḏeme Reʿe medeweeie | zegeree weieꜣe* ||

˘ ˘ ˘ ˘ ˘ ˘ ˘ ˘ ˘ ˘ | ˘ ˘ ˘ ˘ ˘ ˘ ˘ || *ẖezefe Ꞽesedeze ḥereie | me ʿete ḏezerete* ||

˘ ˘ ˘ ˘ ˘ ˘ ˘ ˘ ˘ ˘ | ˘ ¯ ˘ ˘ ˘ ˘ || *ḥr'ntete seꜣereie wedene | feꜣee nefe neie* ||

˘ ˘ ˘ ˘ ˘ ˘ ˘ ˘ ˘ ˘ | ˘ ˘ ˘ ˘ ˘ ˘ ˘ || *neḏeme ẖesefe neṯerewe | šeteꜣewe ẖeteie* ||.

This is of course an artificial vocalization aimed uniquely to make the *morae* evident. This result should be compared with the results of studies in vocalization. From Coptic, it appears that 1) *sḏm=f* forms have the second radical vowelless, independently of the verbal class: (*dj.t-*)*ḫn* > *(t)ahno*; (*dj.t-*)*msy* > *(t)mesio*; (*dj.t-*)*snḳ* > *(t)senko*, (*dj.t-*)*ḥms* > *(t)hemso*: the numerous *sḏm=f*'s found here should look like these; 2) 3-rad. pronominal forms of nominalised verbs have the stress on the first radical: *ẖdb=f* > *ẖŏtbef*; *prḏ=f* > *pŏrčef*; *snḳ=f* > *sŏnkef*, and so on: *sꜣr=i* too should look like **sŏꜣrī*; 3) 4-rad. pronominal forms of nominalised verbs have the stress on the third radical: *sḥwr=f* > *sehwōref*, *smnj.t=f* > *semnētef*, and so on: the same should hold true for *mdwi=i*: the masculine form occurring here should be **medwō(j)ef* > **medwōf*; the feminine form *mdwj.t=f*, which is found elsewhere, should be **medwētef*; 4) after a long vowel, the /j/ of *=i* becomes a short /i/ in dieresis, like *r'=i* > *rōï*, "my mouth", *m-sꜣ=i* > *ensōï*, "after me", etc.: the same should happen with *medwōi=i*, > *medwōï*, "my word", "my speaking"; 5) the last consonant of a word different from a *sḏm=f* is usually vowelless (at least in the "standard" syllabic theory: Peust, Egyptian Phonology, 4.3): in Coptic, generally words do not end with vowel unless that vowel was followed by a consonant which fell away in final position, as in some masculine nouns like *to*, "earth", < **taꜣ*; *ho*, "face", < **ḥar*; *iero*, "river", < **ja*(*t*)*r*(*aw*)-*ʿaꜣ*; etc., and in all the feminine nouns: *shime*, "woman", < **z*(*Vt-*)*ḥi:mVt*; *tōre*, "hand" < **ḏa:rVt*; but 6) in the plural *entēr*, "gods", the first syllable seems to have had already originally a grade 0 on the first radical, and the final one seems to follow the scheme **VnṯuurwV* in the frame of Peust's revised syllabic theory (Egyptian Phonology, 4.6-8). If one transfers these considerations to the scheme:

¯ ˘ ¯ ˘ ¯ ¯ | ¯ ¯ ¯ ˘ || *Wedʿe wei Ḏeḥewtey | ḥetp' enṯeerwe* ||

¯ ˘ ¯ ¯ ˘ ¯ | ¯ ˘ ¯ ¯ || *ẖezfe Ḫensew ḥerei | zeš me meꜣʿet* ||

¯ ˘ ¯ ¯ ¯ ˘ | ¯ ¯ ˘ ¯ || *seḏme Reʿ medweei | zegree weieꜣ* ||

¯ ˘ ¯ ¯ ˘ ¯ | ˘ ¯ ¯ ¯ || *ẖezfe Ꞽesdez ḥerei | me ʿet ḏezret* ||

˘ ¯ ¯ ¯ ˘ ¯ | ˘ ¯ ¯ ¯ || *ḥr'nteyt seꜣrei weden | feꜣee nef nei* ||

¯ ˘ ¯ ¯ ¯ ˘ | ¯ ¯ ˘ ¯ || *neḏme ẖesf' enṯeerwe | šetꜣew ẖetei* ||,

For the sake of clearness, I inserted only neuter vowels in this scheme: concerns of timbre may move the question away from the topic treated here. However, for Deḥewtey one may understand *Ḏiḥawtii* as visible from the Cuneiform transcription (Nom. 376 – there is no direct proof of what Sethe, Vok. 181, states on the phantom nature of the vowel of the first syllable), for *Ḫensew*, one may understand *ḪansVw*, (Nom. 166; Voc. 151) and so on.

Some interesting phenomena can be observed: 1) all the caesurae and the verse ends are now aligned – this means that the verses have not only the same number of *morae*, but also of syllables: six in the first hemistich and four in the second, tot.: ten syllables. The coexistence of a constant number of *morae* with a constant number of syllables can be observed also in Sanskrit and Aeolian metrics. The reason of this fact is that, instead of such mandatory foot sequences as those one can see in classic Greek and Latin metrics (Aeolian included), 2) there is a very particular limitation to the composer's freedom: a mandatory number of long and short syllables. The long ones must be always seven, four in the first and three in the second hemistich; the short ones must be always three, two in the first and one in the second hemistich. This feature is very interesting, for it obtains, through another method, the same result of the mandatory foot sequences of the other metric systems we have referred to, i.e. that of having a constant amount of up- and downbeats.

Furthermore, 3) like in Japanese haiku metrics, here we have not the so called *elementum indifferens*. The last syllable is not free like in Greek and Latin metrics: if the others totalise 15, it must be long; if they totalise 16, it must be short. And finally, 4) since the four fundamental feet (pyrrhic, spondee, iamb, trochee) are disyllable, if one divides one of these verses in its fundamental feet, one obtains always five feet: these five feet are nothing else than those five stresses which had been individuated in the very first step of this analysis. This is due to the fact that, as a general rule and apart from the regular stop we already found and another which emerges now (both diaereses and not caesurae), each word occupies a foot of its own:

wḏᶜ	wj Ḏ-	-ḥwty	ḥtp	nṯr.w
ẖzf	H̱nsw	ḥr=j	zš m	mꜣᶜ.t
sḏm	Rᶜ md-	-w=j	zg<r>	wjꜣ
ẖzf	Jsdz	ḥr=j	m ᶜ.t	ḏzr.t
ḥr-nt.t	sꜣr=j	wdn	fꜣ-	-.n=f n=j
nḏm	ẖsf	nṯr.w	štꜣ.w	ẖ.t=j

Figure 3. Foot scheme of the passage.

The regularity of the number of stresses is hence nothing more than a side effect, and not the fundamental feature, of this metrics – not differently from that of the number of syllables. Both arise from a deeper, and truly fundamental, feature: the regularity in number of *morae*, which is nothing else than the regularity in number of radicals and formants as it is visible from the morphologic analysis of the roots and of their verbal and nominal forms present in the passage.

Other passages in the same and in other works show the same kind of metrics with some variation. In the Dialogue, the cc. 86-103 preserve the following poem:

M=k, bꜥḥ rn=ỉ, m=k, / r st ꜣ<p>s.w
m hrw{.w}/ šmw, / p.t / tꜣ=t(ỉ).
M=k, bꜥḥ rn=ỉ, m=k, / šzp sbnw
m hrw / rzf, / p.t / tꜣ=t(ỉ).

M=k, bꜥḥ rn=ỉ, m=k, / r st ꜣps.w,
r bwꜣ.t / n.t tr.w / ẖr.w msy.t.
M=k, bꜥḥ rn=ỉ, m=k, / r st ḥꜣm.w,
r ẖꜣs.w / n.w sš.w / ḥꜣm.n=sn.
M=k, bꜥḥ rn=ỉ, m=k, / r st msḥ.w,
r ḥms.t / ẖr ꜥḏ.w / ẖr.w mry.t.

M=k, bꜥḥ rn=ỉ, m=k, / r z.t-ḥ(ỉ)m.t
ḏ¯d˘ / grg(w) / r=s / n ṯꜣy.
M=k, bꜥḥ rn=ỉ, m=k, / r ẖrd ḳn(ỉ),
ḏ¯d˘ / r=f / ỉw=f / n msdw=f.
M=k, bꜥḥ rn=ỉ, m=k, / dmỉ n ỉty
šnn / bštw / mꜣꜣ / sꜣ=f.

These distiches are organized in three strophes, a quatrain and two sestets, where a same argument is treated from three points of view. The name of the protagonist is detested (or washed away, submerged, hence forgotten) more than 1) the smell of the birds during summer and the catching of a particular fish during the hot days of hunting; 2) the smell of birds, fishers and crocodiles, and their habitat; 3) a woman, a strong boy, a community, and what can be dishonourable for them: respectively, to be discredited towards one's own husband, to see one's own valour defeated by an adversary, to be unfaithful to one's own sovereign. In the quatrain, the temporal and climatic elements are predominant (*hrw šmw, hrw rzf, p.t tꜣ=t*(*i͗*)); in the first sestet, the local elements rule (*bwꜣ.t n.t tr.w, ẖꜣs.w n.w sš.w, ꜥḏ.w*); in the second sestet, phatic verbs are central (*ḏd, grg, msḏi͗, šnj, bšṯ*). The metrics follows the thematic development. The first verse of each distich is of the same metrics already seen with the preceding passage analysed (10+7=17 *morae*), with the first hemistich occupied by the refrain and the second by a sequence which is most of times made of 3 (or 1+2) plus 4 radicals: *r st ꜣps.w, šzp sbnw, r st ḥꜣm.w, r st msḥ.w, r z.t-ḥ*(*i͗*)*m.t*. The second verse is still constant in number of radicals, but this number is different. The second hemistich is always of six radicals: *p.t tꜣ=t*(*i͗*)*, ẖr.w msy.t, ḥꜣm.n=sn, ẖr.w mry.t, r=s n ṯꜣy, n msdw=f, mꜣꜣ sꜣ=f*. As for the first hemistich, in the first strophe, one observes a formulaic repetition of the temporal indication: *m hrw* + 3 radicals, time / season: *šmw, rzf*. In the second one, the local indication is made of a sequence of 1+4+2+3 radicals: *r bwꜣ.t n.t tr.w, r ẖꜣs.w n.w sš.w, r ḥms.t ẖr ꜥḏ.w*. In the second sestet, each first hemistich of a second verse begins with a phatic verb. In the distiches of the first quatrain and the second sestet, the even verses have 7+6=13 radicals; in those of the first sestet, they have 10+6=16 radicals. The second verse of the second sestet, *ḏd grg / r=s n ṯꜣy, grg*(*w*), Copt. *kʸŏl*, "falsehood" < **kʸŏlkʸ* < **kʸŏlkʸew* < **gărgăw*, is of the type, with different vowel, of *kʸăl*, "shield" < **kʸĭlꜥ* < **kʸĭlꜥew* < *qĭrꜥăw* (Vycichl 1983, 337). The central vowel of *ḏd* and of the other 2-rad. verbs should be long: **ḳawad-* > **ḳād-* > *kōt*. The words beginning with <*i͗*> should be considered as beginning with vowel unless Copt. provides contrary evidence, which is not the case of (*i͗*)*r=s*, Copt. *erós*, and of *i͗w=*, Copt. *e-*.

Interestingly enough, the metrics is the same in the first and third strophe, and different in the central one, also if one analyses it with Mathieu's method (with the sole variation of considering unstressed the head nouns of the *status nominales*): in fact, the first and the third strophes seem to be made of enneametric distiches: *M=k, / bꜥḥ / rn=i͗, / m=k, / r st ꜣ<p>s.w //*; *m hrw*{*.w*} */ šmw / p.t / tꜣ=t*(*i͗*) *//*; *M=k, / bꜥḥ / rn=i͗, / m=k, / r z.t-ḥ*(*i͗*)*m.t //*; *ḏd / grg / r=s / n ṯꜣy //*; while, in the central strophe, the second verse of each hemistich contains three, and not four, stresses: *r bwꜣ.t / n.t tr.w / ẖr msy.t //; r ẖꜣs.w / n.w sš.w / ḥꜣm.n=sn //; r ḥms.t / ẖr ꜥḏ.w / ẖr.w mry.t //.*

The even verses of the first and of the last strophe seem to be eighth-syllable lines, with three short syllables freely distributed: *m˘ h˘r˘w š˘m˘w, / p¯.t t¯ꜣ=t˘*(*i͗*)*; m˘ h˘r˘w r˘z˘f, / p¯.t t¯ꜣ=t˘*(*i͗*); *ḏ¯d˘ g˘rg˘w / r˘=s n˘ ṯ˘ꜣ˘y*; *ḏ¯d˘ r˘=f i͗˘w˘=f / n˘ ms˘dw˘=f; š˘n˘n b˘št˘w / m˘ꜣ˘ꜣ s˘ꜣ˘=f.* For *t¯ꜣ=t˘*(*i͗*), cp. l. Eg. *nmmaht = nmḥ=ti͗*, "indem sie zunichte ist" (Osing 1976, 28).

The even verses of the central strophe seem to be decasyllables too, but with four short and six long syllables: *r˘ b˘wꜣ˘.t n¯.t t˘r˘.w / ẖ˘r˘w m˘s˘y.t; r˘ ẖ˘ꜣs˘.w n¯.w s˘š˘.w / ḥ˘ꜣ˘m.n˘=s˘n; r˘ ḥ˘ms¯.t ẖ˘r ꜥ˘ḏ˘.w / ẖ˘r˘w m˘r˘y.t*. The verses have always the same foot sequence: ˘ ¯ ¯ / ¯ ˘ ¯ / ˘ ¯ ˘ ¯. For *ḥ˘ꜣ˘m.n˘=s˘n*, cp. l. Eg. *ṇur[ẹ]tns = n wrḏ.n=s*, "sie wird nicht matt", and *Ša-te-ep-na-ri/e-a = stp.n Rꜥ*, "Der, den Re erwählt hat" (Osing 1976 B, 30).

In the papyrus of Leiden I 34 Rto, preserving Ipuwer's Lamentations, there is a long passage, ll. 7.7-9.8, -12, of which I show here the transliteration of the first 14 verses (ll. 7.7-12):

Mi͗=tn: ḳrḥ.t ḥr mw / mi͗ nny.w;
        tm(*w*) *i͗ri͗ n=f ḏbꜣ.t / m nb ḥꜣ.t.*
Mi͗=tn: nb.w wꜥb.t / d¯r˘ ḥr ḳl;
        tm(*w*) *i͗ri͗ n=f ḳrs / m nb pr ḥḏ.*
Mi͗=tn i͗s: nꜣ ẖpr=w / r rmṯ.w;
        tm(*w*) *ḳ¯d˘ n=f ꜥ.t / m nb ḏrw.t.*
Mi͗=tn:

šps(-)*.wt ḥr šd.w; / sr.w m šnꜥ;*
tm(*w*) *sḏr ḥr ḏrw.t / m nb ḥnky.t.*
Mi͗=tn: nb ẖ(-)*.wt / sḏr*(*=w*) *i͗bi͗=y;*
dbḥ(*w*) *n=f tꜣḥ.w=f / m nb sḫr.w.*
Mi͗=tn: nb.w ḏꜣ(-)*.wt / m i͗s*(-)*.wt;*
tm(*w*) *sẖt n=f / m nb p*(*ꜣ*)*ḳ*(-)*.wt.*
Mi͗=tn:
tm(*w*) *mḏḥ n=f i͗mw / m nb ꜥḥꜥ.w;*
nb i͗ry ḥr gmḥ=s.t / nn s.t m ꜥ=f.

These are distiches of the kind that Mathieu would call "heptametric": four stresses in the first verse and three in the second one: *Mi͗=tn*: / *ḳrḥ.t* / *ḥr mw* / *mi͗ nny.w* // *tm*(*w*) *i͗ri͗ n=f* / *ḏbꜣ.t* / *m nb ḥꜣ.t* //; *Mi͗=tn*: / *nb.w wꜥb.t* / *d*(*i͗*)*r* / *ḥr ḳꜣꜣ* //; *tm*(*w*) *i͗ri͗ n=f* / *ḳrs* / *m nb pr ḥḏ* //; etc. Once again, counting the stresses is useful and necessary. Actually, the accentuative theories (Mathieu's in particular) do not fail to individuate the correct verse boundaries and in this respect they are, in my opinion, correct. I would prefer to count the stresses as 4+5, *Mi͗=tn: / ḳrḥ.t / ḥr mw / mi͗ nny.w // tm*(*w*) */ i͗ri͗ n=f / ḏbꜣ.t / m nb / ḥꜣ.t //*, and they would be some reverse enneametric distiches. The result from the viewpoint of the utility of counting stresses is the same: the verse boundaries are clear. But one should also note that these verses have the same number of radicals too, and hence of *morae*, which are always 17.

The <*i͗*> of *mi͗=tn*, which did not count as a *mora* in the preceding passage for it was in a closed syllable (*mi͗=k* = *m¯k*, two *morae*), now does, for with the 2nd pl. pers. the syllable is open (*mi͗=tn, m¯t˘n*, four *morae*). The term *ḳꜣꜣ,* "hill", is here written *ḳl* (< **ḳ˘ll* < **ḳ˘ꜣ˘ꜣ*) in group writing, <*ḳꜣ-n-r'*>. In the fem. pl. endings, the vowel preceding /w/ is long, as one can understand from Copt. -*ōwe* and -*ēwe* endings: *šps*(-)*.wt* = *š˘ps¯w˘t*; *pꜣḳ*(-)*.wt* = *p˘ꜣḳ¯w˘t*, etc. The initial <*i͗*>'s are vocalic attacks, hence not counting as *morae* when not at the beginning of a sentence, except when Coptic demonstrates their consonantal origin, as in *i͗s*, "lo!", = Copt. *eis* (pron [jis]). Particular is the eighth verse, where the verb *sḏr* adds one more radical to the number: it is possible that this verb follows the same paradigm as *ẖtm* (*štŏm* < *ẖtăm*, q. *šŏtem* < *ẖătmă*(*w*)), *wmt* (*umŏt* < *wmăt*, q. *wŏmet* < *wămtă*(*w*)), etc.: inf. **sḏăr*, stat. **săḏră*(*w*) (in this latter case, the /s/ counts as a *mora*, like in the following verse). The prosp. form is visible in the Copt. causative *čto*, "to lay down" < **tšḏ*(*r*)*ŏ* < **d*(*īt*)-*sḏră*. The evolution is the same as *čpo*, "to beget" < **tšp*(*r*)*o* < **d*(*īt*)-*ẖpră*-.

The particularity of this case is the inner distribution: the normal 10+7 scheme is found in the verses n. 4, 6-10, 13-14 (actually the majority); while the verses 1-3 show a distribution of 11+6; the verses 5 and 11 have 12+5 and the verse 12 has 8+9. But the required number of radicals, and hence *morae*, contained, which is also in this case 17, is always respected. Furthermore, if one considers the possible vocalisation of these "anomalous" schemes: 11+6: *M˘i͗=t˘n: ḳ˘rḥ˘.t ḥr m¯w / m˘i͗ n˘n˘y˘.w*; 12+5: *M˘i͗=t˘n i͗˘s: n˘ꜣ ẖ˘pr˘=w / r˘ r˘m˘ṯ˘.w;* 8+9: *t¯mm˘ s˘ẖ˘t n˘=f / m˘ n˘b p˘* (*ꜣ*)*ḳ¯.w˘t,* one can observe that they respect not only the final sum of 17 *morae*, but also the syllabic and quantitative structure: they are always decasyllables with seven long syllables and three short ones. The difference is in the distribution: in the 11+6 verses, the distribution is the reverse as those with 10+7, i.e. one short syllable in the first hemistich and two in the second; between those with 12+9, the first has all three in the second hemistich, while they have the same distribution as in those with 10+7 in the other and in that with 8+9. This time, this regularity in number of feet has nothing to do with the stress: it is inconstant in number (4 vs 3, or 4 vs 5), but there are always ten syllables and 17 *morae*.

Conclusion

These are nothing more than some examples of application of a morphology-based method to a poetic text. This kind of research must be applied to a way larger number of poetic passages in middle Egyptian literature before being extended to the later stages of the language and provide a complete overview of the matter.

My opinion for these future steps of my research is that it is extremely important to be cautious with the chronological datum. When dealing with metrical matters, one should always keep in mind that synchrony is absolutely prior to diachrony. In this stage of research, to observe all the Egyptian literature under the same lens in order to get instantly a complete theory would be extremely untimely; later metric laws, possibly different from the more ancient ones, could invalidate our view of these latter and vice versa. One should be also cautious with the sources: papyrus is generally more reliable than stone or ostraca, where the writer is often concerned about saving space and other extra-linguistic issues; narrative, epic, lyric, didactic literature is more exposed to poetic composition than epistolography, historiography, and the like. The final step should be to verify whether different numbers of radicals per verse correspond to different kinds of verse, in order to assign different meters to different genres. It is highly likely that different numbers stand for different verses and different expressive purposes.

By now, all I can say is that there are some series of consecutive Egyptian sentences with always the same number of radicals. From a merely statistic viewpoint, the probabilities that these regularities are due to pure chance are low. The probabilities that they are due to reasons other than metrics are even lower. My conclusion is that these verses have the same number of radicals because they have the same number of *morae*; and this conclusion is due to the fact that the fall of a weak radical and its consequent replacement with a long vowel does not affect the final sum of units per verse. If my conclusion is right, then, when we read middle Egyptian poetic texts, we are facing a language photographed at a stage in which it was *mora*-timed. In the most ancient ones (like Akkadian) and in the most phonetically conservative ones (like classic Arabic) among A.-A. languages, vowel length is endowed with phonemic value; so, if my conclusions will be confirmed by further research, middle Egyptian is close to some of the most important among its cognates and, together with them, it preserves a feature which was probably in its direct ancestor at the very moment it split into new branches.

Middle Egyptian metrics, however, seems to be not pure: to the basic principle of the *mora*, that of the syllable is added. It is not unlikely that the reasons of this fact are of a musical origin: the need for a constant amount of up- and downbeats, once the long syllable was (as it is normal) identified with the arsis and the short one with the thesis, implied a constant amount of long and short syllables: isosyllabic verses are the unavoidable side effect of this fact.

The last word is far from being said, and, it should be repeated, these are only the first steps of a possible direction of research, whose final results could be sensitively different from the provisional ones which I exposed in these pages. A fact, however, can be pointed out with certainty: the high number of connections, that metrics has with the fields of historical phonology, philology, phylogenetic studies, and even musicology, makes this challenging field more and more deserving of further study and deeper investigation.

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