Re-excavating Re-excavated Materials – A Case Study from the Royal Necropolis of the Early Dynastic Period at Umm el-Qaab/Abydos

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Naturally all objects deposited in a royal tomb are of considerable interest, especially since only a limited number of royal tomb inventories are preserved from Ancient Egypt. Thus, it is the main aim of the German Abydos project to gather as much as possible from the burial equipment, no matter how fragmented the objects are nowadays. That this endeavour has its limits due to a diversity of reasons will be discussed in this paper. On the basis of some examples it will be shown that the effort is nevertheless worthwhile, as also tiny bits and pieces can tell a lot of information revealing the immense quality and high standard of Early Dynastic workmanship that otherwise would be lost.

1 Introduction

Until the actual burial of the kings of the 1st Dynasty and the two latter of the 2nd Dynasty at Umm el-Qaab in Abydos could be substantiated by the resumed excavations on behalf of the German Archaeological Institute Cairo,[1] it was a wide-spread view that all kings of the first two dynasties were buried at Saqqara while the tombs at Umm el-Qaab served as cenotaphs or a 'southern tomb' for the kings of the 1st Dynasty and the last two kings of the 2nd Dynasty.[2] Beside the seemingly more elaborate tomb architecture, also the amount of finds seemed to favour Saqqara as burial ground.[3]

The paradigm "the larger the tomb, the more important the owner" was naturally transferred to the tomb architecture of the kings as well. On this basis it was quickly obvious that the huge mastabas with their impressive superstructures discovered at Saqqara are more sumptuous than the brick-lined pit-tombs discovered before at Abydos. Thus, for the longest time, the size of the tombs as well as the design of the superstructures were compared with each other, although only at Abydos stelae depicting the royal name were encountered and also the number of subsidiary burials far outnumbered those at Saqqara.[4] In addition, it was always difficult to explain, why

1 The excavations were initiated by Werner Kaiser in 1977 and transferred very soon to Günter Dreyer, who directed it until 2014 when it was passed to Christiana E. Köhler. For literature of the German excavations see the latest preliminary report with references to older publications in Dreyer 2017: fn. 1.

2 Stadelmann 1997: 10–34 with a good overview on the main literature concerning the two main positions cited in fn. 14. See also Engel 2003; Hendrickx 2008.

3 Emery 1954: 3.

4 See especially Emery 1961: 38–104; Emery 1954: 1–4. He was supported by further colleagues, see Stadelmann 1997: fn. 14.

Published in: Andrea Kilian & Monika Zöller-Engelhardt (eds), Excavating the Extra-Ordinary. Challenges & Merits of Working with Small Finds, Heidelberg, Propylaeum 2021, 47–69. DOI: https://doi.org/10.11588/propylaeum.676

to some kings several mastabas of nearly the same size could be attributed at Saqqara and a few other places. It was Barry Kemp in 1966 who first took the enclosures at Abydos and the number of subsidiary burials into relation with their respective tombs when comparing the structures with those at Saqqara.[5] This led to a completely different picture revealing that the architectural lay-outs at Abydos were in fact much larger than those at Saqqara.[6]

The impression of the more substantial tomb equipment at Saqqara is readily to be grasped when comparing the publications of the two sites.[7] While in Saqqara lavish amounts of a diversity of objects in a good state of preservation were retrieved, the material from Abydos was to a large extent shattered into small bits and pieces. Although the excavators of Abydos tried to compensate this situation with considerable quantities of photographs and drawings, it remained difficult to get a good idea of the articles deposited in the tombs. In addition, it was impossible to present the amounts of objects, as in both excavations either no or only limited amounts of time were spent for reconstructing the fragments.[8]

This situation changed considerably during the German excavations (Fig. 1).[9] For the first time, the excavations were not only directed at the exposing of the architecture, but the surrounding dump hills containing the bulk of the tomb inventory were investigated as well.[10] Since 1993 the author was involved in the excavation and the processing of the tomb equipment of king Den as well as in the depositions discovered below the dump hills surrounding that tomb. Since then a lot of time was spent on sorting, joining and documenting the material in drawings, photographs and descriptions. There are, however, nevertheless a lot of hindrances for a complete reconstruction of the original tomb inventory.

2 Disturbing factors on the site[11]

2.1 Tomb robbing

As in many cases throughout time and space, the tombs were robbed soon after the burial. Signs for the robbing were encountered at all tombs. Thus, for instance, the walls between the subsidiary chambers at the tomb of Den were broken through directly below the roof.[12] The location of these holes makes only sense when conjecturing that the roof was still intact during the

5 Kemp 1966.

6 Kemp 1966; Kemp 1967. He was soon followed by Kaiser who pointed out the same arguments after he started his work at Umm el-Qaab, see Kaiser 1981; Kaiser 1982.

7 For Saqqara see especially Emery 1938; Emery 1939; Emery 1949; Emery 1954; Emery 1958. For Abydos see Amélineau 1899a; Amélineau 1902; Amélineau 1904; Petrie 1900; Petrie 1901; Petrie 1902.

8 Petrie mentions that he spent a lot of time for amending stone vessels, he does, however, not refer to other materials, see Petrie 1900: 18. This is also corroborated by the limited number of and randomly chosen pottery vessels published from Abydos.

9 For the latest excavation report with references on older publications of the German excavations see Dreyer 2017: fn. 1.

10 It has to be mentioned that this concept only developed in the 1990ies. At the beginning the excavations were restricted as well only to the architecture and some peculiar finds, such as inscribed pottery fragments and sealings, see Kaiser/Grossmann 1979; Kaiser/Dreyer 1982.

11 Abbreviated versions can be found in Müller 1998: 147–149; Müller 2006: 37–38.

12 Dreyer 1998a: 145–146.

Fig. 1: Map of Umm el-Qaab/Abydos (© DAI Kairo, drawing: M. Sählhof).

robbing. That the time-lapse between burial and robbing was rather short can best be recognized at the tomb of Khasekhemwy. In contrast to other tombs at Abydos, the roof of Khasekhemwy's structure was situated 5 m below the walking horizon involving that the pit was completely filled up with the diggings.[13] In addition, there are signs that the tomb was covered by a large tumulus.[14] Furthermore, the burial chamber was placed in a pit below the floor of the tomb and covered with plaster so that its location was not visible.[15] In spite of these protective measures, the burial chamber was directly affected by robbers' holes leading from the walking horizon vertically down between the sides of the pit and the brick lining leading then horizontally to the burial chamber.[16] As no robbers' holes were encountered at other places of the tomb, their location suggest that the robbers had precise knowledge of the position of the burial chamber. Thus, in all probability the robbers were either involved in the building of the tomb or were part of the personnel responsible for the filling of the tomb with grave goods or even the burial itself.

Be this as it may, judging from the objects recovered during the excavations it is quite certain that the robbers' endeavour was directed on the most precious objects of the tomb inventory, most probably objects made of metals and semi-precious stones, such as jewellery, weaponry and other prestige goods. As side-effect of robbing procedures a part of the grave goods certainly was destroyed either by the dropping of mud bricks from the robbers' holes, by trampling on the densely packed grave goods during the search for the more precious objects kept in boxes or inside the coffin and of course by ransacking the buried person in the search of the adorning jewellery and maybe weapons.

2.2 Burning of the tombs

At an unknown moment the tombs were burnt. Interestingly, the burning was directed on the royal burial chambers alone, while the subsidiary chambers were to a large extent spared. This consistent focus on the burial chambers of the kings excludes an accidental event but argues instead for an intentional act of destruction.[17] Furthermore, the two royal tombs from the late 2nd Dynasty were not affected by the fire. Therefore, two time spans were proposed: Either, the middle of the 2nd Dynasty for which period political turmoils can be reconstructed,[18] or, the First Intermediate Period. For the latter surmise a passage in the 'Teaching for Merikare' could be referred in which the destruction in the Thinite nome is mentioned.[19]

The fire had a much worse effect on the preservation of the grave goods than the tomb robbery. Especially in the tombs of Den and Djer, the fire was very severe resulting in the baking of the mud-bricks walls of the thicknesses up to 4 m.[20] Some of the bricks as well as some pot-

13 Dreyer 1998b: 164.

14 Dreyer 2003: 110.

15 Dreyer 2003: 108.

16 Dreyer 2003: 111.

17 This is in contrast to Petrie's supposition of an accidental burning, see Petrie 1900: 7.

18 This was transmitted in a personal communication by Jochem Kahl to the author.

19 See in Quack 1992: 71. He refutes, however, this interpretation, see Quack 1992: 81–82. That the burning of tombs took place after the Old Kingdom at Abydos could be observed by Janet Richards for instance in the tomb of Wnj, see Richards 2002: 100.

20 For the tomb of Djer see Petrie 1901: 9 and for the tomb of Den see Dreyer 1998a: 141–142; Müller 2009: 13; Müller 2013b: 256 fn. 6. In contrast to the tombs of Djer and Den, other tombs were only affected in the upper parts where the beams of the roof had been inserted into the walls, see Engel 1996: 58; Engel 2006: 94.

Fig. 2: Fragment of an inlay made of ivory, partly burnt, tomb of Den (Ab K 411) (© DAI Kairo, photo: F. Barthel).

tery vessels even melted.[21] Naturally, a large part of the grave goods completely disappeared in the fire. Interestingly, however, from the pieces which survived can be concluded that at a certain point during the fire the roof broke down covering a part of the grave goods, so that unburnt fragments can be joined with burnt fragments (Fig. 2). But, as will be shown below, also completely burnt fragments still hold interesting information.

2.3 Restoration of the tombs

Also at a point that cannot exactly be dated, parts of the tombs were restored with unbaked mud-bricks.[22] Naturally the restoration took place after the burning of the tombs. Some scarce evidences point to a date at the beginning of the Middle Kingdom,[23] but it also could have happened a bit earlier.

Although only small parts of the tombs were restored, it is obvious from the location of the restorations that a secure access to the royal chambers was intended.[24] For this endeavour large parts of the material filling the royal chamber as consequence of the burning and the collapse of the roof had to be removed.[25] As till the modern excavations the majority of the preserved grave goods were encountered in the dump hills surrounding the individual tombs, the material taken out of the burial chambers was obviously deposited in the immediate vicinity.

This process of re-deposition of the grave goods certainly entailed additional fragmentations.

2.4 Osiris cult

It is most likely that the restoration of the tombs were directly connected with the installation of cultic activities for Osiris that were inaugurated in the late Old Kingdom.[26] Interestingly, the Osiris cult was not only focused at the tomb of Djer as burial place of Osiris, but was encountered at all royal tombs. In the course of these cultic activities which lasted until the Roman

21 The melting of the bricks and pottery is based on personal observation.

22 For restorations in the tomb of Djer see Dreyer 2013: 20; for the tomb of Den see Dreyer 1998a: 141–142; Dreyer 2000: 124; Dreyer 2003: 111; Müller 2004; for the tomb of Qaa see Engel 1996: 64–66; for the tomb of Khasekhemwy see Dreyer 1998b: 165.

23 See fn. 22.

24 Engel 1996: 58; Dreyer 1998a: 141–142; Dreyer 2003: 111.

25 The complete clearance of the royal chambers in the course of the restorations could best be attested in the tomb of Qa'a. Here a cup from the 12th Dynasty was unearthed directly on the wooden floor of the king's chamber which was covered by several clearly discernible layers of wind-borne sand which themselves were concealed by a staple of loose bricks, see Engel 1996: 64–66, Abb. 21a, Taf. 13c.

26 For the latest publications with references on earlier literature to the Osiris cult see Budka 2019; Effland/Effland 2013. In recent years pottery and other objects from the late Old Kingdom could be attested, see Budka 2019: 16; Effland/Effland 2016: 34; Müller 2004: 145.

period[27] a lot of depositions were arranged some of which are situated relatively close at the tombs.[28] When considering that at this period already dump hills existed around the tombs from emptying the royal burial chambers, we have to account for further relocations of material.

2.5 Destruction by Copts and search for gold

Also during the Coptic period activities could be detected at the royal tombs.[29] While at the tomb of Khasekhemwy an installation consisting of a diversity of vessels could point at a living place of a monk or a storage place for jars on his way to the mountains, it is surmised that in this period a range of destructions took place.[30]

In the following centuries a lot of activities in the search of gold and other treasures are attested throughout Egypt and at Abydos a variety of objects dating to the 10th to the 16th centuries AD were discovered.[31]

We have no record on illicit diggings in the course of the emerging interest in Egypt by Europeans from the 16th century onwards. But judging from the amount of objects that arrived in European collections we have to reckon with more disturbances in the course of search for precious objects.[32]

2.6 Excavations in the 19th and 20th centuries

As a result of the development of Egyptology several excavations were undertaken at the site. Nothing is recorded about the activities that took place under the auspices of Mariette at Umm el-Qaab in the 1860ies. It is, however, well-known that his teams were active in all parts of Abydos and thus in all probability also at the royal cemetery of the Early Dynastic Period.[33] Although published in three large volumes, Emile Amélineau was not able to retrieve a conclusive picture of the royal cemetery or even to reconstruct the sequence of the kings after his excavations from 1895 to 1898.[34] He was, however, the first modern scholar who recognized the historical importance of this site. From his excavation report it becomes clear that he did not uncover the tombs systematically from one end to the other, but that instead parts opened and cleared from interesting objects were refilled with the rubbish from neighbouring parts. All excavated objects that were not taken by the museum in Cairo, were transported to Paris where a large part was sold during an auction in 1904, while a part stayed in his private collection.[35] As can be gleaned from his publication, during his excavations a lot of objects were complete but he was also interested in fragments of broken objects which exhibited interesting details.

Although excavated in a much more systematic way than Amélineau, Petrie also refilled emptied parts of the tombs with the rubbish of newly opened structures in his clearance of the cemetery in the two winters of 1899/1900 and 1900/1901, i.e. immediately after Amélineau had left the site.[36] Also his excavation resulted

27 Effland 2013; Effland 2014; Effland/Effland 2013: 126–129.

28 See for instance the depositions to the north of Djer's tomb complex in Budka 2019: 21 fig. 1.4.

29 Effland 2013; Effland/Effland 2013: 130–131.

30 Effland/Effland 2013: 131.

31 Effland 2008; Effland/Effland 2013: 132–135.

32 For a short overview of attested visitors of Abydos see Effland/Effland 2013: 135–138.

33 Petrie 1900: 2.

34 Amélineau 1899a; Amélineau 1899b; Amélineau 1902; Amélineau 1904.

35 Vente Amélineau 1904.

36 Petrie 1900; Petrie 1901; Petrie 1902.

thus in a more complex relocation of the material. Like in Amélineau's case, the better preserved objects were transported to Cairo, while the majority of the excavated material consisting of bits and pieces were taken to London where they were auctioned and spread to a large diversity of private and public collections.

Interested in the discovery of new tombs, Édouard Naville re-excavated in 1909–1910 only small parts of the known tombs and concentrated instead on the areas not touched by Amélineau and Petrie in the surrounding areas of the tombs.[37] While he cleared the tomb of Peribsen completely, the tombs of Djer and Den were only partly excavated.[38] Although in the text he mentions that he decided to excavate the tomb of Djer entirely once more, on the published map can be gleaned that he focused on the burial chamber and a few subsidiary chambers only. In addition, he mentions that he stopped at the staircase of the tomb of Den and entered his burial chamber.[39] Contrary to his predecessors, he used a narrow-gauge railway and removed the material deposited in the vicinity of the tombs to an area far to the east of the tomb of Den and to the northwest of the tomb of Peribsen.[40] The number of published objects is very limited. Not surprisingly, the new dump hills he created are thus full of relocated materials from all periods. Due to the huge size of these dump hills, it was not possible to include their clearance into the re-investigation of the German excavations.

Finally, Walter B. Emery spent some time in the early 1930es at Umm el-Qaab and focused most probably on the tomb of Den.[41] He did not give any report on his activities. That work was done at the tomb could, however, be gleaned from the considerably lower level of filling of the royal chamber of Den's tomb and the low level of material covering the walls when the German Archaelogical Institute started its work at Abydos. In addition, to the east of the tomb irregular dump hills were encountered next to the staircase which according to the map and photographs published by Naville had been removed during his work there. Thus, also Emery's investigations resulted in the displacement of some material.

2.7 Tourism

Since at least 200 years Abydos was an attractive site visited by myriads of tourists.[42] Usually, visitors are not particularly interested in potsherds or small fragments of broken objects, but it cannot be excluded that some material disappeared in the course of the visits. Even if only minor numbers of objects were taken away, a lot of material was further fragmented or even completely destroyed by trampling over the site. Furthermore, it has to be accounted for the displacement of fragments, as people interested in old stuff use to pick up fragments while walking and dropping them at other places, when not interested anymore.

2.8 Environment

Last but not least, also the effects of the environment should not be neglected. The destructive effects of the wind on unbaked mud-brick

37 Naville 1909; Naville 1910; Naville 1914.

38 Compare the plan published in Naville 1914: pl. XXI in which the areas investigated are indicated.

39 Naville 1914: 35.

40 In his reports he only mentions that he used the railway-gauges but not where he delivered the material, see Naville 1909: 2–3; Naville 1910: 1–3; the rails are visible in Naville 1914; pl. XVIII.

41 See Kaiser/Dreyer 1982: 211 fn. 2.

42 For visitors of the 19th century see Effland/Effland 2013: 135–138.

architecture was already noticed by Naville who argued that this was one reason why he refrained from re-opening all tombs at Umm el-Qaab.[43] The destructive force is also nowadays visible in a quite short period of time.[44] But not only mud-bricks are easily affected by the wind, the effects are also visible on other objects. Thus for instance, Petrie was able to locate the original place of erection of the royal stelae on the basis of the state of their surface condition.[45]

Although only encountered a handful of times during a century, rains have a devastating effect on the objects. The desert keeps a lot of salt-crystals in the sand which dissolve during the rains and spread over the goods imbedded. These salt-crystals break the objects open and cause additional fragmentation.

Further fragmentations, dislocations and destructions are caused by a diversity of animals. Thus, termites destroy wood and other organic material; saurian, snakes, a variety of mice and other animals living in the desert build holes and nests which also results in the relocation of material.

2.9 Effects of the disturbances

Many factors of disturbances led to the destruction, fragmentation and dislocation of the objects on the site and the mixture of grave goods with that of the neighbouring tombs. Thus, even when thoroughly gathering all fragments which are still on the site, only a part of the original tomb inventory is still available. In addition, a lot of fragments are nowadays distributed in museum and private collections around the world handicaping their reconstruction further. Furthermore, the dislocation of the material complicates the attribution of the grave goods to their respective original placement.

3 Attribution of the objects to specific tombs and to the location inside the tombs

Due to the disturbing factors discussed above, it is rather challenging to reconstruct the objects' original location. The difficulties are not restricted to problems concerning the placement of the goods inside the tombs, but also the correct attribution of the items is a complex task.

In this respect the fire that attacked the tomb is of considerable value. As only the royal chambers were affected by the burning, it is easy to attribute all burnt objects to these localities. More care has to be taken with the relocation of the unburnt material. The reconstruction of fragmented objects revealed that unburnt pieces can be fitted with burnt remains (Fig. 2). The fact that not the complete material shows stains of burning that was once deposited in the royal chamber definitely goes back on the collapsing of the chamber's roof resulting in the covering of parts of the grave goods which were thus protected from the fire.

In general one would assume that material found inside the chambers and in their immediate vicinity should be identical or at least closely related with the location of their original placement. That this reasoning might be misleading has been discussed above, as the degree of dislocation depends very much on the size and layout of the royal chamber as well as the number of activities that took place at the tombs. Thus, for instance the tombs of Den and Djer were more often investigated by modern excavators than the others. Due to the staircases, the entry to and the possibilities of easy removal of the fillings were an easier task than for tombs without a

43 Naville 1914: 35.

44 Adams 2012; Gleeson et al. 2017.

45 Petrie 1900: 6.

staircase. Also, the amount of material that had to be taken out of the royal chambers caused a more sophisticated system of working procedures. Furthermore, when considering the layout of the cemetery, it becomes evident that some parts of tombs are more affected by material mixed with that of the neighbouring tombs than other parts. Thus for instance, a location at the edge of the cemetery leaves at least two sides of a tomb more or less free from the effects of mixing, while a placement in the middle of the cemetery asks for more care in the attribution.

The degree of mixture can best be gleaned from the inscribed material. Fortunately, a lot of objects had been inscribed with the royal name or with the names of officials that can be attributed to specific kings.[46] The majority of inscriptions can be found on inscribed sealings used for a variety of items, such as pottery vessels, bags and boxes.[47] Tags made of ivory and bone were once attached to oil jars, textiles, sandals and further items.[48] Also some of the stone vessels, gaming pieces, weapons, furniture and some other objects carried once a royal name. It seems rather straightforward that objects associated with the inscribed material derive in their majority from the same tomb.

But also this conclusion cannot be taken without some restriction. Firstly, there are several clear evidences of heirlooms. Thus, for instance a stone vessel fragment bearing the name of Narmer (Fig. 3) was found in the dump hills to the south of Den's tomb.[49] Although reasons could be brought forward that this fragment once was transferred from Narmer's tomb to Den's burial place by one of the diverse reasons mentioned in the section of disturbing factors, there are two main arguments which rather suggest that the vessel represents an heirloom. The strongest argument concerns its state of preservation: as it is heavily burnt, it cannot originally have been deposited in the tomb of Narmer, as that tomb had not been set on fire. Furthermore, there are other cases in which heirlooms could be attested. For instance, a complete stone cylinder jar bearing the name of Aha was found in tomb S 3036 at Saqqara which dates to the reign of Den.[50] Also in this case a direct mixture with the content of a neighbouring tomb can be excluded due to the large distance of the mastaba dating to the reign of Aha.[51] The most plentiful case in this respect is presented by the tomb of Djoser which contained a lavish number of inscribed stone vessels of all predecessors encompassing the 1st and 2nd Dynasties.[52]

Secondly, there is proof for the immediate successors having delivered items inscribed with their names for the funeral. This habit is easily recognizable for succeeding kings who were buried at Saqqara, such as king Hetepsekhemwy and king Djoser, for both of which inscribed sealings have been encountered at the tomb of Qaa and the tomb of Khasekhemwy respectively.[53] It is also traceable for items bearing the name of

46 The extent of inscribed material in the royal tombs can best be gleaned from the excavation reports by Amélineau, Petrie and the German excavations. Meanwhile the first volume dedicated to the publication of the Early Dynastic cemetery at Umm el-Qaab was published, see Engel 2017.

47 Besides the volume of Engel 2017 and the excavation reports see also Müller 2012. For a definition of the different types of sealings see Engel/Müller 2000.

48 For the use of tags see Dreyer 1998d: 113–145; Engel 2017: 314–352.

49 Kuhn 2017: 78–79.

50 Emery 1949: 76, pl. 19B.

51 For this tomb, S 3357, see Emery 1939.

52 Lacau/Lauer 1959; Lacau/Lauer 1965.

53 For sealings of Hetepsekhemwy in the tomb of Qaa see Dreyer 1996: 71–72; for those of Djoser found in the tomb of Khasekhemwy see Dreyer 1998b: 166; Dreyer 1998c.

Adjib whose tomb is in quite a distance of Den's grave.[54] More difficult to interpret are, however, objects with the name of Djet or Meret-Neith which were found between their tomb and the tomb of Den. For those items each of the three graves could be the original place of location.[55]

In the case of the grave goods belonging to the tomb of Den, several criteria could be worked out implying their attribution to that grave (Fig. 1). Firstly, material deposited in the dump hills on the south-western part and the north-eastern part can with great certainty be attributed to his tomb as no other tombs are in the immediate vicinity. Furthermore, in the case of the north-eastern dump hill the location of the staircase leading to the royal burial chamber at this side was by far the easiest and most direct way for the removal of its filling. Secondly, only in Den's tomb the floor of the burial chamber was covered with slabs of granite, gray granite as well as rosary granite,[56] many fragments of which were found in the surrounding dump hills together with burnt brick fragments. Thirdly, in a lot of cases the dispersion of fragments belonging to the same object encompassing all areas of the tomb ascertains an attribution to Den's tomb. This is for instance the case for the fragmented inlay shown here in Fig. 2 whose parts were collected in areas T-SW + T-S + T-W + T-NO + T-OO (see Fig. 4 for the locations of the find positions).

At the same time, these dispersions also reveal the extent to which some fragments spread revealing that some pieces were distributed to areas which cannot be explained by the activities of tomb robbers, excavators or other direct involvement at the tombs proper but must be the result of other types of visitors at the tombs.[57] And finally, the concentration of fragments especially belonging to wine jars in the south-eastern part of Den's tomb can easily be explained with the existence of vast chambers used as magazines for these vessels, as the bottoms of the oblong chambers are covered with the impressions of hundreds of wine jars.[58] The dispersion of the

Fig. 3: Stone vessel fragment with the name of Narmer inscribed, Calcite-alabaster, burnt, tomb of Den (Ab K 5093) (© DAI Kairo, photo: F. Barthel).

54 The stone vessels of the tomb of Den were the subject of the dissertation of Robert Kuhn accomplished in 2019 who is in the process of publication.

55 Kuhn 2017: 77.

56 Amélineau 1899a: 124–125; Petrie 1901: 9; Dreyer 1998a: 142.

57 For the spread of material in the tomb of Qaa see Engel 2017.

58 Dreyer 1993: 59, pl. 11c.

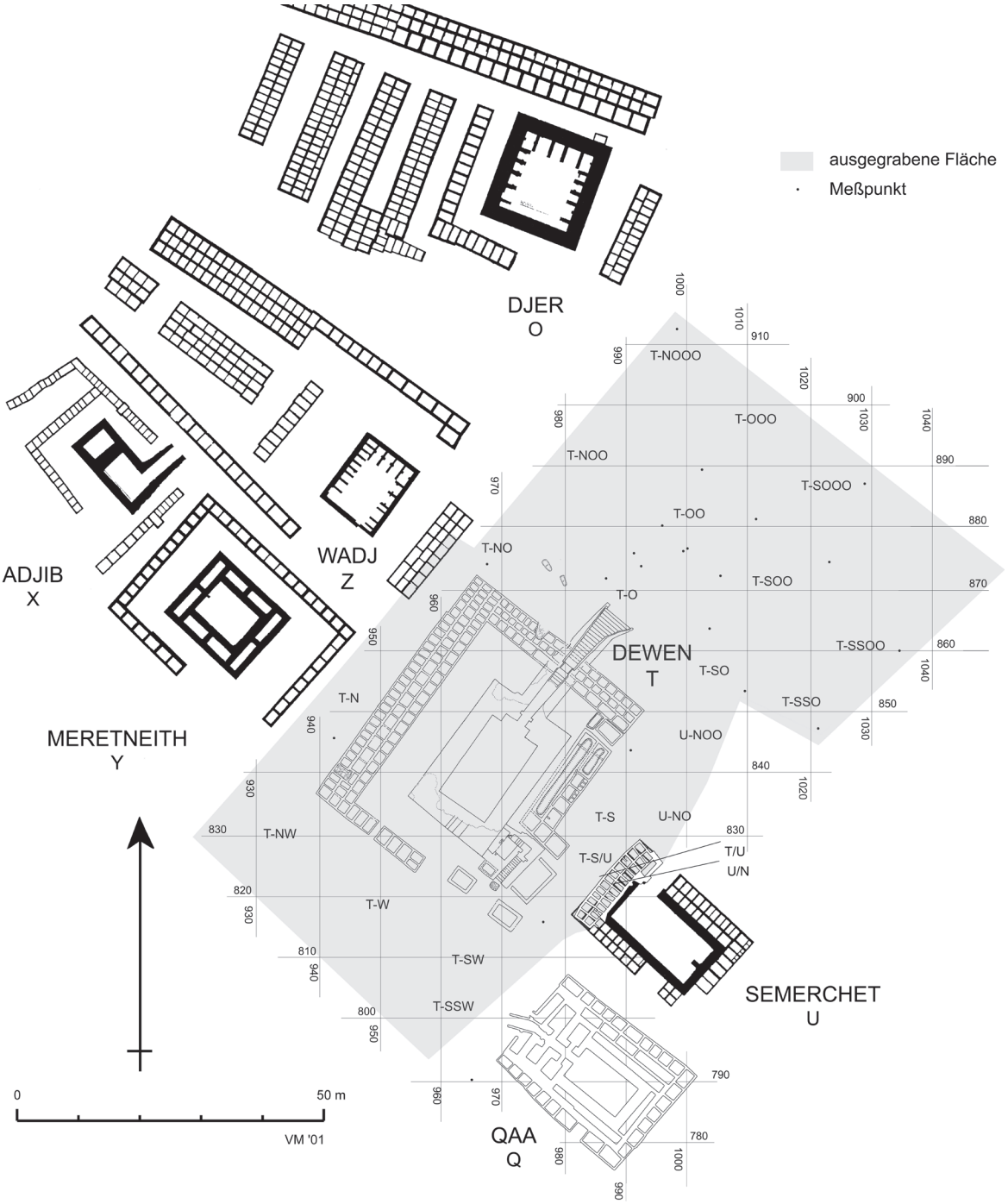

Fig. 4: Map of the tomb of Den with designations of the areas of origin (© DAI Kairo, drawing adapted by V. Müller).

objects throughout the cemetery also revealed that the excavators worked in many cases from north to south. The reason for this procedure can be found in the direction of the wind which is most often blowing from the north, as working against the wind is rather painstaking.

4 Dealing with large amounts of fragmented objects

Although the tomb robbers stole the most precious items, the fire destroyed the majority of grave goods in the royal burial chambers and former excavators removed a lot of the material, still several thousands of objects are left of the former burial equipment.[59] The quantity of material that has to be processed is even higher, as the majority is broken into small bits and pieces. During the excavation each fragment was therefore labelled with a shortened designation of its find position (see Fig. 4) so that dislocations and dispersion could be reconstructed and thus the most probable attribution to its place of origin. This procedure was done with fragments of pottery vessels, stone vessels and objects belonging to other categories alike.

The largest amount of deposited objects consists of vessels made of pottery and stone. For both categories only a limited amount of fragments could be reconstructed to complete vessels or at least complete profiles. All vessels of which a considerable part was preserved were drawn, photographed and their data inserted into a database. Of the tens of thousands of fragments the diagnostic pieces were drawn, such as rims, bases and handles as well as pieces with paintings, inscriptions or pot marks, while the wall fragments were counted and weighed according to wares and types. Together with the dispersion of the inscribed material, the distribution of the vessels is building the basis for the attribution of the material to the specific tombs and the chronological development of the material.[60]

In contrast to the vessels, each fragment of the other object categories was documented as single item with drawings, photographs and descriptions inserted in a database – at least as long as part of the original surface could be detected. This effort seemed to be warranted, as so many fragments of the same or similar items are distributed in the diverse museums around the world. The documentation should make a possible reconstruction more promising on the basis of the envisaged publication – especially since the appearance and character of some objects are difficult to discern when the state of preservation is too fragmentary. It was also interesting to note during the documentation that many of Petrie's illustrations were not well identifiable because he often only produced line drawings without shadowing and only a minority was photographed. Thus, for instance, an inscribed object made of ivory was illustrated only partly by a photograph and interpreted by him as handle of a measuring cord.[61] Fragments belonging to a similar piece were found during the German excavations in subsidiary chamber T-O 3[62] and area T-S (Fig. 5a–d). They both represent gaming pieces in the shape of granary models typical for the *snt*-game. The inscriptions name "follower of *ḫ3st.j*" (i.e. the *nzw-bjt*-name of Den) and the name of a grain, here *bd.t*, i.e. barley, together with the *ꜥnḫ*-sign in its typical

59 A good impression is given by the publication of the tomb of Qa'a, see Engel 2017.

60 Confer for this procedure Engel 2017.

61 Petrie 1901: 25, pl. VII/13.

62 For the designations of the locations inside the tomb see Dreyer 1993: 58, Abb. 13.

Fig. 5a–d: Gaming piece with inscription made of ivory, partly burnt, tomb of Den (Ab K 980 + Ab K 10665) (© DAI Kairo, photo: F. Barthel; drawing: V. Müller).

form of the Early Dynastic period.[63] Petrie is of course not to be blamed for a false understanding, yet the lack of a photograph showing the whole object, also from the broken side, as well as technical drawings forced the reader, however, to rely on his interpretation.

Amélineau on the other hand had only documented fragments of the more peculiar objects. While the illustrations are also difficult to read, only one side of the object is represented by the photographs. The latter is naturally also valid for Petrie's photographs.

Fig. 6: Fragment of stone vessel with decoration made of green siltstone and gold leaf application, tomb of Semerchet (Ab K 6195 = MoA R 1073) (© DAI Kairo, photo: F. Barthel).

5 Informative value of fragments – Reconstructing objects from bits and pieces

Even if only preserved in small parts, the objects encountered in the royal tombs reveal their high quality. This applies not only to the diversity of exclusive materials, such as precious stones and metals or ivory, but also to the high standard of manufacturing techniques which were already available in this early period.[64] Most obvious are these exorbitant qualities and high level of craftsmanship in the variety and technical perfection of stone vessels.[65] It seems that no kind of stone was spared, even from coarse-grained stones, such as rosary granite, delicate thin-walled plates were produced. Nearly all stones were available in Egypt. Small quantities were, however, imported such as obsidian which was either imported from Ethiopia or southern Turkey[66] and lapis-lazuli which came from Afghanistan. While the latter was only used for the production of beads, small vessels were made of obsidian.[67]

Naturally due to the many disturbing factors only very tiny amounts of gold could still be detected, but the few preserved pieces clearly reveal that gold was widely used for the covering of stone vessels (Fig. 6)[68] and furniture (Fig. 7a–b). That the wooden piece was also gold plaited can be deduced from the use of fine textiles which was soaked with resin for fixing the gold on the surface of the stone vessel fragment in Fig. 6. The existence of textile on the wooden fragment must have served the same purpose. The fragment was found to the northeast of the tomb of Den (T-NO, see Fig. 4) and could thus likewise derive from the tomb of Djet. The latter's tomb was, however, less affected by fire. The reading of the

63 For a discussion of the two pieces see Müller 2000: 111–113 with fig. 22d. At that time only the larger part was known, the additional fragment with the *ꜥnḫ*-sign was only later found. For the reading as *ꜥnḫ*-sign S34 see Regulski 2010: 184, 256.

64 See Engel 2017 for the tomb of Qa'a. The amount of material used in the tomb of Den was much larger and more lavish than that in the tomb of king Qaa.

65 Kuhn 2017; Hendrickx 2008: 66; de Putter 2000.

66 Bavay et al. 2000.

67 Engel 2017: 409.

68 Müller 2013a: 39, Abb. 25b.

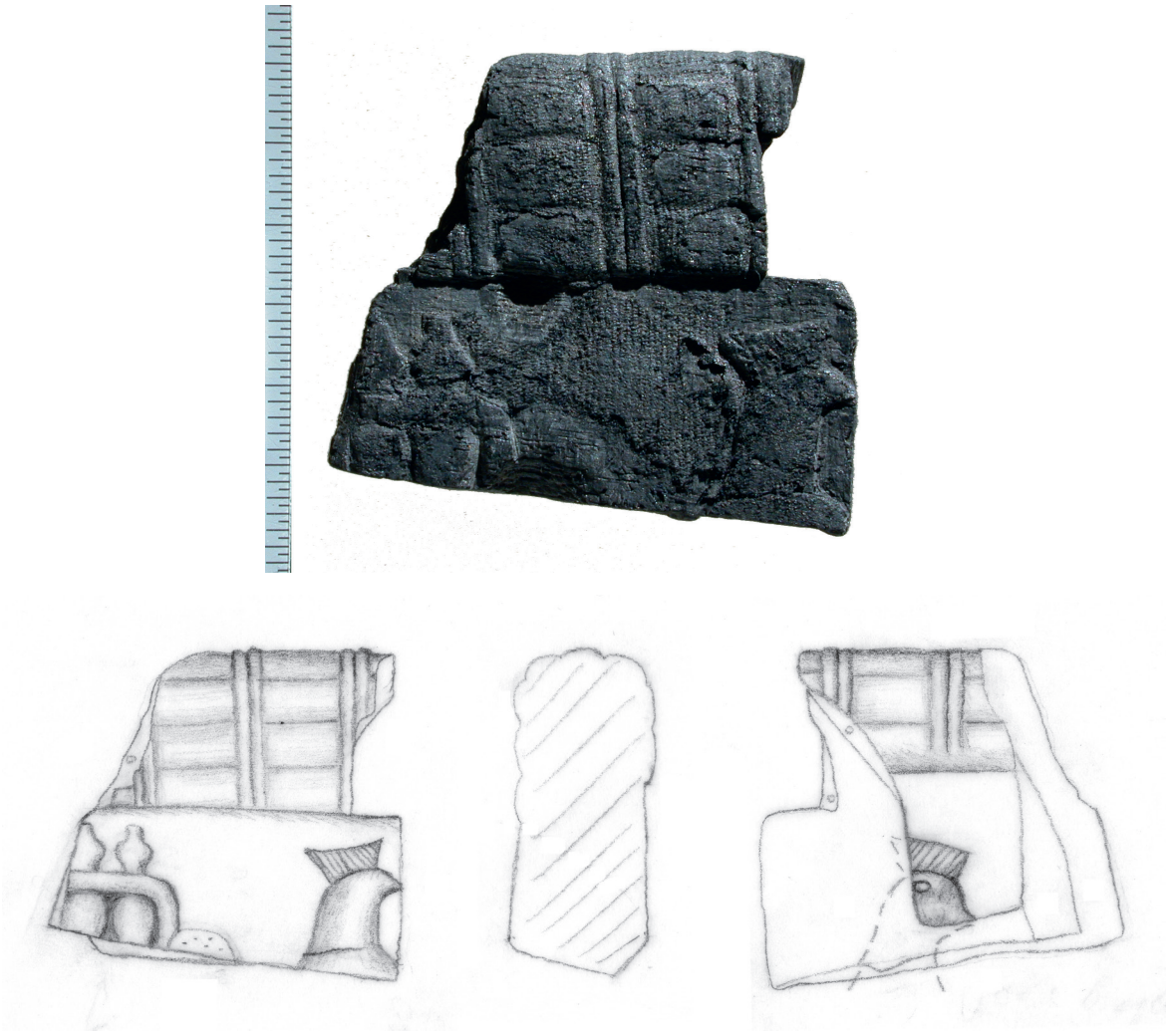

Fig. 7a–b: Fragment of decorated furniture with inscription, charred wood, tomb of Den (Ab K 977) (© DAI Kairo, photo: F. Barthel, drawing: P. Müller).

inscription is not straightforward: the combination of a bird with the sign W17 is reminiscent of the reading "*ḫntj*" as part of *ḫntj-jmntjw*, i.e. the god Chontamenti, were it not for the bird's head, which proposes a reading as G22, the hoopoe. This sign was albeit not yet attested in the Early Dynastic period.[69] Although only small pieces are preserved, it is recognizable that the furniture resembled in many respects those discovered in the tomb of Hetepheres at Giza.[70]

The decoration on fragments like this one as well as pieces made of ivory and bone reveal that the imitation of perishable material was in wide use. Ropes, reeds and other plant material were lavishly translated into other materials made of wood, ivory and stone. The tiny piece of ivory

69 Regulski 2010.

70 Reisner 1955.

Fig. 8a–b: Fragment of decorated furniture made of ivory, tomb of Den (Ab K 05330) (© DAI Kairo, photo: F. Barthel, drawing: V. Müller)

Fig. 9: Fragment of a gaming piece in the shape of a lion made of ivory, tomb of Den (Ab K 382) (© DAI Kairo, photo: F. Barthel).

Fig. 10: gaming piece in the shape of a lion from the tomb of Djer, Cairo JE 43939 (after Petrie 1901: pl. VI/3-4).

Fig. 11: Legs of a board game in the shape of bulls' legs, made of ivory, from the offering place to the south of Djer's tomb (Ab K 6070a-b = MoA R 548a-b) (© DAI Kairo, photo: F. Barthel).

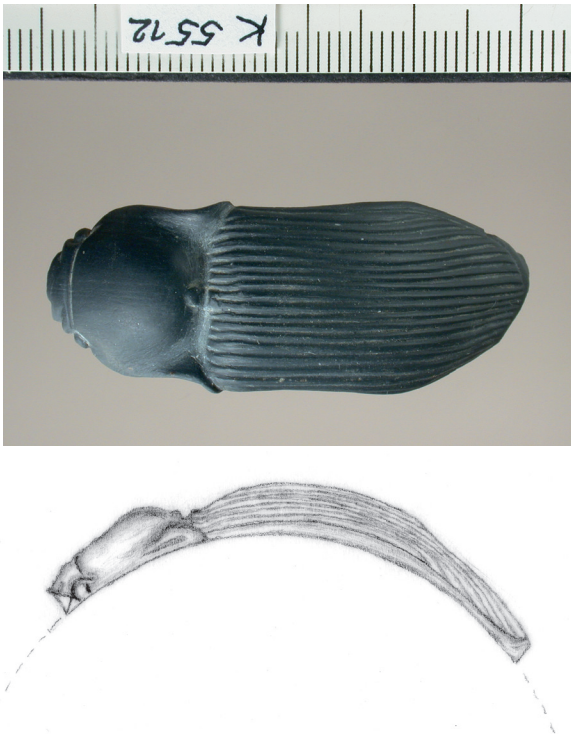

Fig. 12a–b: Fragment of an armlet in the shape of a beetle, made of black siltstone, tomb of Den (Ab K 5512 = MoA R 1060) (photo: F. Barthel, drawing: I. Nebe).

(Fig. 8) discovered in the royal burial chamber of Den represents reeds wound together with other reeds. Similar fragments were found by Petrie in the tombs of Den, Djer and Semerchet[71] – it is at the moment not determinable from which tomb this piece originally came.

But also the depiction of animals or at least parts of them played an enormous role. Lions (Figs. 9–10) and dogs made of ivory were used as gaming pieces. The legs of furniture and board games (Fig. 11) made again of ivory are constructed in the shape of bulls' legs and stone armlets could be decorated in the shape of beetles (Fig. 12). The piece of armlet was found to the east of the tomb so that the probability that it came from Den's tomb is rather high.[72] This type of beetle is connected with the goddess Neith and often depicted twice as mirror-inverted.[73]

For more abstract designs, inlays made of ivory, bone, wood and faience were in wide use for all kinds of boxes, stools and beds (Fig. 2).[74] These abstract designs imitate in many cases colourful woven mats. Ivory was also used for other objects, such as bracelets, gaming pieces, clappers, etc. In their majority it derived from hippopotami, but a small amount was definitely taken from elephants. Different kinds of local wood were used for a variety of objects, next to furniture, coffins as well as parts of tools and weapons were pro-

71 Müller 2000: 113 with fn. 186.

72 Müller 2003: 91.

73 Hendrickx 1996; Adams 1999.

74 For inlays used for a diversity of boxes see Müller 2016.

duced of this material. Also rather simple materials were encountered among the grave goods, such as reeds, papyrus and other plants for boxes or unbaked mud, which was not only used for a large amount of sealings, but also for models of granaries[75] and for a variety of gaming pieces. Textiles were an important commodity not only for garments but also for a diversity of other purposes, such as for coverings of vessels before they were sealed or for stabilizing stone vessels inside boxes.[76]

In many cases the fragments themselves reveal enough for giving an impression of their original appearance. For the identification of others, comparative material from contemporary tombs are necessary. In this regard, the good state of preservation of the huge mastabas at Saqqara, Helwan, Abu Roash and other places are of unmeasurable importance.

6 Aims of the project

The main aim of the project is naturally the reconstruction of the original tomb equipment of king Den and its attribution to specific chambers and areas inside the tomb. It is also of interest to characterize the diversity of objects used for a royal burial.[77] Which objects had their purpose during the funeral? Which objects were considered important for the here-after? Which objects were a royal requisite and which were independent of the social status? What is an heirloom and what a present of funeral attendants or the royal successor? Does the funeral equipment of the subsidiary burials differ from contemporary burials of the middle or lower class?

The vast amount of inscribed sealings will allow for important insights into the administration of the 1st Dynasty as many offices, administration units and titles are mentioned. The analyses of the pottery vessels will not only reveal the wares and types in use of a royal tomb in the 1st Dynasty, but it will also suggest which vessel types were part of the general trading network of the country as a whole and which types were of a more restricted nature. It should also be possible to elucidate some special workshops. A side-effect of the tomb's location in the middle of five other tombs will furthermore allow for the establishment of a fine chronology of vessel types due to the mixed nature of the material found in the dump hills.

Finally, the presentation also of the tiny and on first glance unspectacular fragments will hopefully activate some attentiveness to material still kept unnoticed in some museum storerooms.

75 Müller 2018.

76 Jones/Killen 2008.

77 Preliminary thoughts on some aspects were formulated in Müller 2013b.

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