



P R A G U E E G Y P T O L O G I C A L S T U D I E S

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Mastaba of Queen
Khentkaus III
in Abusir

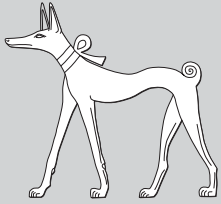


Tomb of the chief
physician
Shepseskafankh

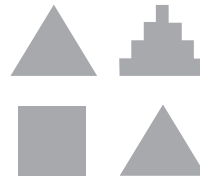
The miraculous
rise of the Fifth
Dynasty



Old Kingdom
canopic jars from
new perspective



P R A G U E EGYPTOLOGICAL S T U D I E S



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Language review

Anthony Patrick Arias, B.A.

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PhDr. Oleg Man

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Photograph on the front page

A reconstruction of the offering place in front of the false door of Nefer in tomb AS 68d (photo M. Frouz)

Dear readers,

It has been thirteen years since the first issue of *Prague Egyptological Studies* was published in 2002. Since then it has become an important and wide-selling journal, providing both the scientific and laymen audience with the latest results of our fieldwork and various studies in the field of Czech Egyptology dealing with the civilisations of ancient Egypt and Sudan.

After more than a decade of its existence, we are pleased to launch the first issue of the English edition of *Prague Egyptological Studies*. The English edition is dedicated exclusively to the history, archaeology and language of third millennium BC Egypt. Yet it also aims to include studies dealing with foreign relations during the period. At the same time, we also welcome publications on the latest advances in the study of the environment and studies evaluating the significance of applied sciences. Our principal aim is to accommodate studies concerning either primary research in the field or those that bring up theoretical inquiries of essential importance to the indicated scope and time frame of the journal.

The present issue is devoted to the excavations at Abusir, the principal field of research of the Czech Institute of Egyptology. The individual reports are dedicated to the excavation projects carried out in the pyramid field (Khentkaus III), as well as in the Abusir South area (tomb complex AS 68, the tomb of Shepseskafankh). In addition to these, you will also find more theoretical studies focusing on the "Khentkaus problem", which analyses the significance and importance of three women bearing the same name during the Fourth and Fifth Dynasties, a study dealing with model beer jars and their typological evolution, an interesting seal with a figure of Bes, and an interpretation of canopic jars bearing significant tokens of past treatment on their bodies.

We trust that the English edition of *Prague Egyptological Studies*, which will be produced once a year, will find a firm place among other Egyptological scholarly journals. We are convinced that a clearly defined profile of this scientific journal will attract not only the attention of many readers but also submissions of significant contributions from the scientific community and thus streamline major advances in the fields of third millennium BC Egypt history, archaeology and the like.

Miroslav Bárta and Lucie Jirásková

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Fig. 1 The set of all four canopic jars of Princess Khekeretnebty with large gypsum patches on their surface (photo J. Vaněk)

Damage and repair of the Old Kingdom canopic jars – the case at Abusir¹

Lucie Jirásková

The fundamental precondition for the afterlife and the existence in the netherworld in ancient Egypt was the preservation of the physical body of the deceased, which was traditionally ensured by mummification. The process of mummification is thought to include not only the special treatment of the body concerning desiccation and embalming, but also evisceration.

In the Old Kingdom the mere presence of canopic jars in tombs has been taken as confirmation for evisceration in this period. However, almost all of the Old Kingdom canopic jars have been found empty, without any traces of mummified viscera.² This circumstance – especially in undisturbed burial contexts – has opened up discussion concerning the existence and procedures involved in the mummification process in the Old Kingdom.

Teodozja Rzeuska and Miroslav Bárta pointed to the problem of the interpretation of the packages of wrappings and Old Kingdom canopic jars. Although the packages are thought to contain viscera, no analysis has ever confirmed it (Rzeuska 2011). The analysis of linen wrappings from a chest found in Saqqara (shaft C2/10) by the Polish mission did not detect any human or animal tissues, whereas the presence of resin and oil was found (Rzeuska 2010: 109–111). Rzeuska also tackled the problem relating to the small volume of most of the canopic jars (Rzeuska 2010: 119); however, she did not take into consideration that the internal organs are mostly composed of water: after being dried, they would fit into most of the jars without any problem. Bárta presented an example of the intact tomb of Neferinpu that contained empty canopic jars (Bárta 2015). Although the burial was found sealed and undisturbed, the canopics did not contain anything,

therefore proving, in this instance, that they merely represented symbolic vessels.

A detailed study of the canopic jars found in various parts of the Abusir necropolis has given a new perspective to the problem of this particular piece of material culture (fig. 2). A peculiar feature that has been observed on many of them has added doubts concerning the usage of this class of vessels.

Evidence of damage and repair at the Abusir necropolis

Most of the Old Kingdom canopic jars have a similar shape: they are represented by tall shouldered jars with rounded or slightly angled collared rim and flat base. In some cases, mostly towards the end of the Old Kingdom, the shape changes and variations appear; for instance, jars

with short neck, vessels with almost concave-shaped walls, *etc.* Apart from these pieces, pottery variations have been recognised. These are of two types. The first one imitates the stone pieces in shape (Martin-Pardey 1980: 48–52; Reiser-Haslauer 1989: 186–188), whereas the second type is only roughly similar to the stone ones. The shoulders are wider, whereas the body sharply tapers towards the bottom, where it widens a little bit, forming a kind of foot (*e.g.* Martin-Pardey 1980: 53–68, 151–158; Reiser-Haslauer 1989: 65–70). The latter type is made of fine clay, red slipped and burnished.

Most of the stone pieces of Old Kingdom canopic jars seem to be carefully made of microcrystalline limestone/dolomite. Contrary to the beautiful pieces, such as those found in the burial chamber of Meresankh III (Dunham – Simpson 1974: Fig. 16a) or Seshemnefer III (Martin-Pardey 1980: 100–108), most of the jars are rather roughly shaped and not perfectly smoothed. Moreover, recent excavations at Abusir South have brought to light several pieces of canopic jars coming from the Fifth Dynasty tombs that bear traces of damage either free of repairs (rarely) or repaired (mostly) using different types

of plaster or gypsum (fig. 3). On the one hand, there are many examples of ancient repairs to various kinds of objects made of limestone, including false doors or sarcophagi. As they were made of large pieces of stone, it was not easy to avoid a little damage during transport especially, but that damage was covered over with the use of white or pink plaster. On the other hand, the surface damage on some canopic jars has been so extensive that it seems improbable that it might have been caused by the craftsmen during the process of production.³

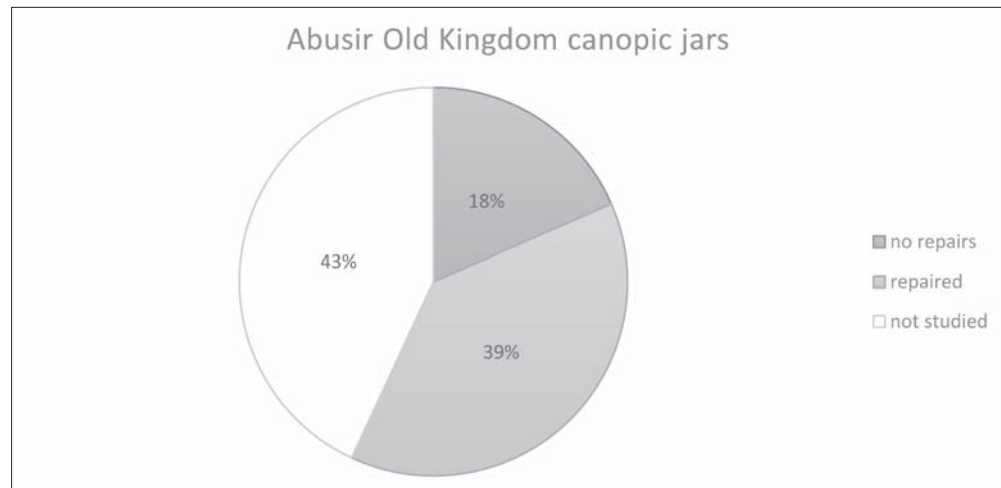
The first two sets of canopic jars studied by the author and recognized as bearing traces of secondary damage and restoration were found at Abusir South in 2012 and come from the tomb AS 67 (Bárta – Vymazalová – Dulíková *et al.* 2014: 17–20). The first example was collected within the filling of the burial chamber at the bottom of Shaft 1 belonging to the owner of the mastaba, Nefershepes/Memi⁴ (15/AS67/2012), the second one comes from the burial chamber of Shaft 2 that was probably made for his wife (5/AS67/2012).

The burial chamber of Shaft 2 was excavated first (Bárta – Vymazalová – Dulíková *et al.* 2014: 19–20). Its

tomb	owner	dynasty	material	preservation	number of jars	state of study	state of surface
AC 3	Raneferef	5	travertine	fragments	4	not studied	not studied
AC 7	Djadjaemankh	5	limestone	fragments	1	not studied	not studied
AC 14	Khentkaus II	5	travertine	fragments	2	not studied	not studied
AC 15a	Khekeretnebtj	5	limestone	complete	4	studied	repaired
AC 15b	Tisethor	5	limestone	fragments	4	not studied	not studied
AC 22	unknown	5	travertine	fragments	4	not studied	not studied
AC 24	unknown	5	limestone	fragments	1	not studied	not studied
AC 25	Nakhtsare	5	limestone	fragments	2	not studied	not studied
	Kahotep	5	limestone	complete	4	not studied	not studied
AS 4	Rahotep	5	limestone	fragments	1	not studied	not studied
AS 16	Qar	6	limestone	complete	4	not studied	not studied
AS 31	unknown	5	limestone	complete	1	studied	no repairs
AS 32	unknown	5	limestone	complete	1	not studied	not studied
AS 37_E	Neferinpu	5	limestone	complete	2	studied	repaired
AS 37_E	Neferinpu	5	limestone	complete	2	studied	no repairs
AS 37_W	unknown	5	limestone	complete	1	studied	repaired
AS 37_W	unknown	5	limestone	complete	3	studied	no repairs
AS 47	unknown	5	limestone	complete	2	studied	repaired
AS 47	unknown	5	limestone	complete	2	studied	no repairs
AS 67_1	Nefershepes	5	limestone	complete	4	studied	repaired
AS 67_2	unknown	5	limestone	complete	4	studied	repaired
AS 68c_1	unknown	5	limestone	complete	4	studied	repaired
AS 68d_2	Neferhathor	5	limestone	complete	4	studied	no repairs
AS 68d_4	unknown	6	limestone	complete	4	studied	repaired

Fig. 2 Table presenting the canopic jars found in the Old Kingdom tombs at Abusir (author L. Jirásková)

Fig. 3 Chart showing the percentage of canopic jars with surface damage and repair within the Abusir cemeteries (author L. Jirásková)



furnishing was largely disturbed, but it seems that most of the original equipment remained there in the burial chamber. The tub of the sarcophagus was dug into the bedrock, and a roughly cut irregular limestone slab was used as its lid. Almost all of the objects were found thrown onto the lid of the sarcophagus. Three canopic jars and their lids were found (separately) scattered in the thick layer of debris covering the sarcophagus. One jar was situated in the northeastern part of the sarcophagus, by the hole that was made by ancient robbers to get out the body of the deceased. The fourth lid was not present in the chamber and therefore must have been taken out by

ancient looters. The canopic jars of Shaft 2 were only slightly damaged and restored. There were a few minor holes and patches found on their surface.

The archaeologists were later confronted with a similar situation in the main shaft – Shaft 1 (Bárta – Vymazalová – Dulíková *et al.* 2014: 18–19). The burial chamber was carefully dug, cased with blocks of white Tura limestone, and furnished with a beautiful sarcophagus made of the same material. The chamber was looted in antiquity and the burial equipment was scattered all around including a complete set of four canopic jars with four lids, one being left in the opened sarcophagus, again. In this

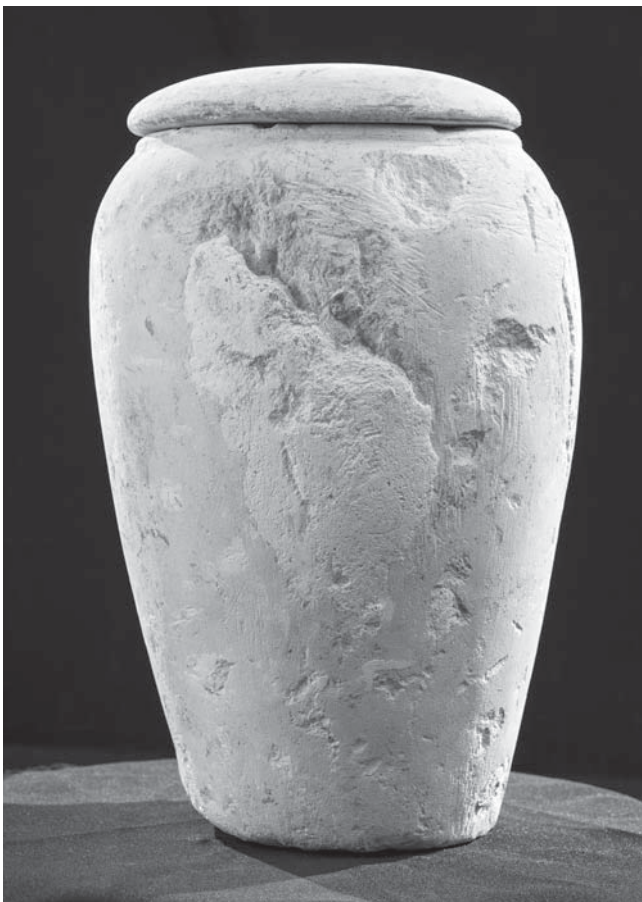


Fig. 4 Canopic jar 15-1/AS67/2012 with a large patch and other minor damage and repair (photo M. Frouz)



Fig. 5 Large hole in the canopic jar 291-1/AS68c/2013 (photo L. Jirásková)

case, however, two of jars were broken into pieces (15-3/AS67/2012 and 15-4/AS67/2012). Only small patches and damage are visible on two of the jars (15-2/AS67/2012 and 15-3/AS67/2012), larger repairs can be observed on the other two (15-1/AS67/2012 and 15-4/AS67/2012; fig. 4). The quality of patches was tested by the breaks, since the jar 15-4/AS67/2012 was broken exactly in the area of one of its repairs. Originally, the filling must have been firmly attached to the hole, as the patch broke with the jar, did not flake off, and remained stuck to its body.

The primary analysis of the jars in relation with other contents of the two burial chambers has led to conclusions that both the chambers with the two sets of canopic jars had been recycled, *i.e.* used twice during a short time (Arias Kytarová – Havelková – Jirásková *et al.* 2013). The archaeological context points to the interpretation that the first burials in both shafts (northern and southern) were disturbed by robbers soon after the funeral ceremony in the Fifth Dynasty. The chambers remained open for some time and then they were used again during the Sixth Dynasty for another set of burials. The canopic jars damaged on the surface by the first looting were then restored and used again for the newly buried deceased (maybe members of the same family).

Although it seemed to be the most probable interpretation of the situation in the tomb AS 67, subsequent research in the Old Kingdom canopic jars brought to light more examples of large surface damage and repair, which pointed to the fact that it was probably not an occasional and rare feature for jars to be repaired. In the same year, 2012, excavations of the tomb complex AS 68 at Abusir South revealed one set of perfectly made canopic jars from the Fifth Dynasty period (195/AS68d/2012) (Bárta – Vymazalová – Dulíková *et al.* 2014: 29–30). However, research in the same area in the year 2013 yielded a shaft with a badly damaged canopic set with surface fillings within large irregular depressions (291/AS68c/2013) (Vymazalová in this issue).

Both chambers had been looted in history, the first one belonging to Neferhathor, the wife of Nefer (Shaft 2, AS 68d), the latter to the supposed husband of Princess Sheretnebtj (Shaft 1, AS 68c) whose name remains unknown. Both sets were made of microcrystalline limestone, the one of Neferhathor was much carefully crafted, however. The canopic jars of Shaft 1 of AS 68c were of rather traditional shape with no particular design. Two jars were found with minor damage or patches on the body (291-2/AS68c/2013 and 291-3/AS68c/2013), but the other two bore either a large hole without any repair (291-1/AS68c/2013; fig. 5), or large patches on the body (291-4/AS68c/2013; fig. 6). Only the first two jars had traces of whitewash on the outer surface. Moreover, the archaeological situation in Shaft 2 of AS 68d attests to the *in situ* placement of the canopic jars of Neferhathor by the southeastern corner of the sarcophagus with their lids still on the jars. The burial chamber of Shaft 1 of AS 68c was largely disturbed by robbers who seemed to have searched above all for the valuables of the deceased. The sarcophagus was looted and the burial equipment scattered all around the chamber, but most of the burial equipment

remained in the tomb, including the canopic jars left by the southeastern corner of the sarcophagus. Contrary to the situation in AS 67 there was no evidence of reuse of this burial chamber.

Such interesting finds have led to deeper research regarding the actual state of the surface of canopic jars discovered during previous excavations in Abusir. And surprisingly, it revealed several more instances. The tomb of Neferinpu (excavated in the year 2007) represents another Fifth Dynasty family mastaba situated at Abusir South (Bárta *et al.* 2014). The main shaft of the owner of the mastaba had two burial chambers with both entrances at the bottom of the shaft. One was oriented to the east – the intact chamber of Neferinpu himself, the other to the west – probably the chamber of his wife or mother. Both the chambers contained among other parts of burial equipment a set of canopic jars. The jars coming from the disturbed western burial chamber (23–26/AS37/2007; Bárta *et al.* 2014: 105–107) were found south of the sarcophagus. All of them were complete, only one was partly broken. The canopic jars of traditional shape are rather roughly smoothed, but they do not bear any repairs except for one piece (25/AS37/2007; fig. 7). There are two larger patches to be found on its surface. As they were made from rather pinkish material, they are clearly visible. However, there is another much larger, but almost invisible patch, which was made of soft white gypsum. The two different types of material used for repairs of the jar possibly point to two different phases of restoration performed at different times.



Fig. 6 Large patch on the canopic jar 291-4/AS68c/2013 (photo M. Frouz)



Fig. 7 Visible pinkish patch, and invisible white gypsum patch on 25/AS37/2007 (photo L. Jirásková)



Fig. 8a Part of rim of Neferinpu's canopic jar 6/AS37/2007 attached back to its body using white plaster (photo L. Jirásková)

The burial chamber of Neferinpu contained another set of canopic jars that were also found south of the sarcophagus, and seem to have been kept in a sealed wooden box (4–7/AS37/2007). The excavator describes them as damaged, including the lids (Bárta *et al.* 2014: 95–97), which is a curious circumstance in the context of an intact burial chamber. Moreover, another kind of repair can be found on one of them (6/AS37/2007). A large piece of the vessel's rim was broken off in the antiquity, and it had been attached to the jar again using the white plaster in the same manner as in case of the patches (fig. 8a–b).⁵ Since it still adheres well, it is not possible to find out the exact way the repair was made. What remains visible is only the plaster around or over the edges of the breakage. If it was also used as a “glue” between the vessel and the shard is not clear. Only one more jar of the set bears several small patches (4/AS37/2007).

The same year 2007 led the expedition to the excavation in the tomb AS 47 lying further to the south of the excavation area. Only one shaft has been cleaned so far, and this added new material for comparison. The burial chamber had been visited by ancient robbers again, however, most of the burial equipment remained inside, including a set of canopic jars. These were of classical shape, except for one piece (9/AS47/2007). This jar is wider in shoulders than the others, finely smoothed, and the rim part is more subtle. Even the cavity differs from the rest of the set. There are several patches to be found on its surface, but all of them are perfectly made and smoothed, therefore, they are not visible at first glance, and appeared only after careful study. A small part of the rim was also broken off in antiquity and modelled again using plaster or attached – as in case of Neferinpu. More striking is the bottom part of the canopic jar: its large part was broken or cut off, which then caused the jar to be unstable. It could not have been used any more as a container (fig. 9). As there is plaster still visible in the fracture, one can either suppose that the base part had once been attached to its position after the damage, or that it was modelled from plaster. However, the base part of the jar was not found within the debris in burial chamber. The other canopic jars of AS 47 were also nicely smoothed, including their bases (which is not usual), except for 4/AS47/2007 that also had a patch on its body.

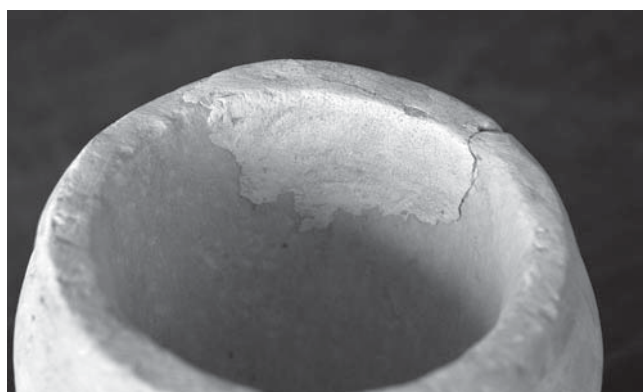


Fig. 8b Detail of the repair of the rim part of 6/AS37/2007 (photo L. Jirásková)



Fig. 9 Canopic jar 9/AS47/2007 with a part of the base missing (photo L. Jirásková)



Fig. 10 Khekeretnebt's canopic jar P5564a with a large white gypsum patch (photo J. Vaněk)

Even the material from older excavations proved to be of the same nature, such as the canopic jars that come from the tomb of Princess Khekeretnebt (fig. 10), who was buried in the area of pyramid field at Abusir, in the so called Djedkare's family cemetery (Verner – Callender 2002). The four canopic jars, today kept in the Náprstek Museum in Prague, show large repairs on the bodies of three jars (P5562a, P5563a, P5564a), the fourth with minor patches only (P5565a). All of them were made using white soft gypsum, and they are of entirely the same manner as those found on the bodies of previously mentioned sets from Abusir. The burial chamber of Khekeretnebt had also been visited by robbers in ancient history (as had most of the Old Kingdom tombs), but in this case an accident stopped them from looting its entire contents. Probably soon after the burial of the princess, a ceiling slab collapsed and covered the northern part of the chamber by the fill of the mastaba core. Therefore some of the original equipment of Khekeretnebt remained *in situ*, as the robbers dug their way to the southern part and left the latter part that was covered by debris (Verner – Callender 2002: 20). The canopic jars, originally situated in the southern part of the burial chamber were scattered around. One of the jars was discovered in the looted sarcophagus, another on a pile of limestone chips in the southwestern corner of the burial chamber, another beside the western wall and the last in the northwestern corner of the chamber (Verner – Callender 2002: 21).

The fact that the canopic jars of Khekeretnebt had been largely damaged and repaired prior to the placement into

the burial chamber has not been discussed in the publication (Verner – Callender 2002: 31–32), although the patches are extensive. We might thus ask ourselves, if there might be other damaged and repaired Old Kingdom canopic jars left unrecognized in museum storerooms. And there probably are. For instance, the canopic jars of mastaba S 677/817 seem to bear similar patches as the Abusir examples (Martin-Pardey 1980: 69–74). Moreover, the researchers who are unaware of such a situation – and even curators of museums – consider these ancient repairs as modern treatment (*e.g.* Martin-Pardey 1980: 147–150).⁶ We might thus consider that the patches on the Old Kingdom canopic jars from Abusir probably do not represent a feature caused by specific situation in a particular tomb or cemetery, but should rather be regarded as a so far unexamined phenomenon awaiting detailed study and discussion. Only careful examination of available material can give us idea of how common the restoration process was.

Interpretation

The question that rises with the newly discovered Fifth Dynasty canopic jars from Abusir, and their comparison to earlier finds with similar features, prompts us to ask what the reason for such damage and repair was. The easiest explanation could be the poor quality of the limestone/dolomite. A geological macroscopic observation performed on the canopic jars of Princess Khekeretnebt

by geologist Lenka Lisá proved that this was not the case.⁷ In fact, the canopics of Khekeretnebtj are the most damaged pieces from all of those discussed here. The stone of other canopic jars from Abusir is compact without any irregularities or shells that might cause the surface damage, and therefore the quality of stone was probably not the reason.

If the stone was good enough, another interpretation comes to mind. The jars were produced in workshops, where there might be employed craftsmen of various skills. Could some of them have made the bad cuts during the process of production due to their lack of skill? They could, but such a trend of repaired vessels should have been observable even elsewhere. The opposite is true, since the Old Kingdom stone vessels are perfectly made. Either large-size or model stone vessels occurring in burial chambers of the same time do not usually have patches on their bodies. Moreover, one may expect only a few sets of poor quality jars within the area of Abusir, but there are too many of these complete canopic jars with traces of damage and repair. In fact, from all nine studied complete sets of four jars, only one had all four canopics in perfect condition. Visual observation of the damage also points to a different place of origin than the workshop.⁸

If the stone was fine enough for easy-going production, and most of the craftsmen were skilled enough to produce either roughly or finely smoothed vessels without these large holes, there may be other interpretations left. One was already mentioned above, in the case of tomb AS 67. The jars might have been recycled. It means that they would have been taken out of a looted burial chamber, where they had been damaged (not completely broken) by robbers, repaired, and used again with another burial. But, could we expect the old Egyptians to reuse such objects as canopic jars, when we know even from the Old Kingdom that all the vessels and material employed during mummification and getting into contact with the body of the deceased was usually buried either in the burial chamber or within the tomb of the particular person, *i.e.* in the deposit shaft (Rzeuska 2010, 2011)? Such a reuse might be thinkable in the case of very important people, like the king himself (or a great *akh*; Jiří Janák, personal communication). But no one re-used the canopic jars of kings. These are usually made of travertine and their size (especially height) exceeds the usual scale (Vlčková 2002; Labrousse 1996: 159–160). Maybe poorer officials, who had no chance of having their own canopic jars made, might be interested in getting some older “second hand” pieces. However, Princess Khekeretnebtj, or the husband of Princess Sheretnebtj, are evidently not of lower social status. And moreover, poorer officials do not usually have much burial equipment and hardly any canopic jars appear in their burial chambers. In these instances, it is difficult to imagine that the people of such a social status, connected to the royal family, would be satisfied with poorly presented jars. If the canopic jars were really thought and made for the storage of viscera (at least symbolically), they must have been of a great importance for the deceased in respect of his/her afterlife – it was a part of his/her own body. They would have been brand new and perfectly crafted, such as other parts of burial equipment.

There is also another argument against this interpretation. The tombs which were looted in the Old Kingdom times were usually disturbed in a particular way. The thieves knew very well what they should expect in the burial chambers, and they searched for its specific contents – valuables of the deceased. Therefore, they omitted all the furnishings outside the sarcophagus, and tried to get to the mummy by breaking holes in the sarcophagus. The canopic jars then usually remained *in situ* or were merely thrown aside.

The reason for the damage and repair of the outer surface of the jars must then be sought from a different area. The traces left on the surface actually do not testify to the bad quality of stone, or wrong process of production. They also do not seem to be damaged by looters on purpose (when thrown on the floor they would break into pieces). If damaged by looters, they must have been rolled on the floor of the burial chamber to get such surface holes (Lenka Lisá, personal communication). In fact, they rather seem to be worn out.

What kind of pre-burial activity then would be connected with such an object? Definitely, an activity that involved some considerable length of time to cause these minor or major holes in the bodies of the jars, for they either during the process of usage, or later required restoration before they were buried with the deceased. The repairs where the patch fell off show that the surface of the jar in the proximity of the hole was intentionally roughened by a coarse-grained stone, so that the filling would hold better. And they really do. The patches usually still adhere well even nowadays. Only in the case of jars broken into pieces, some of the patches were already found fallen off. But often they remained and broke with the body of the jar (*e.g.* 15/AS67/2012). In some cases the restoration was probably not performed, such as in the case of a jar from the burial chamber of AS 68c, Shaft 1.

What sort of activity would include pre-burial usage of canopic jars? The persons concerned also had to be aware of the importance of such an activity. As the poor state of the jars was not a problem in the case of burials of people of high social rank, it must have been connected with a religious activity or ritual that would “sanctify” the jars. If they were already from their beginnings meant as containers for embalmed viscera, they would have definitely been produced for tomb storage alone. Although this is evidently not true for many instances, it is not possible to override the fact that in later periods canopic jars kept the same shape, material, and the same number. In this respect, it is highly probable that the Old Kingdom canopic jars were primarily produced to be used in the process of mummification.

But, what were the elements of Old Kingdom mummification? The so far available data give evidence for linen wrappings and resin (Germer 2011). Could the jars have been used in the process of mummification to keep any of these two materials or any other substance that might have been needed, but for which we have no evidence? Since some of the jars are largely worn out, they should have been used not only for a single person, but for more people over a longer period of time and, when the occasion came, they could have been buried with one of the deceased. The

jars would have been kept at a storeroom for some time, carried from one place to another, *etc.* If not as containers, they might also have been used only symbolically in a ritual involving either the mummification process, or in the burial ritual performed afterwards, or they also could have been used for instance in the mortuary temple of the king. Since they would have been involved in a ritual, they could not have been just thrown away. It would also give us a reason for their emptiness. If they were worn out or not needed any more, there was no need to fill them with anything, and they were just deposited in a tomb.

For instance, the tomb AS 54 at Abusir South also pointed to the possibility that the tomb served as a deposit place for already used stone vessels. The large assemblage of stone vessels and their pieces excavated from the southern shaft of the tomb, and its immediate vicinity, contained either almost complete pieces with clear traces of usage (especially tables), or sherds that were used for an undetermined activity probably after they were broken (Jirásková 2011). The assemblage found in the tomb AS 54 gave the impression that some of the vessels might have been brand new, but some were collected from places, where rituals were performed.

When the canopic jars from the Abusir tombs are compared with each other, the largely damaged and repaired pieces seem to have been included within the burial equipment of more important people. Tomb AS 67 contained two shafts, the main one designated for the owner of the mastaba, the other probably for his wife. The really unattractive jars surprisingly came from the main (southern) shaft. Likewise, the other set of largely damaged canopic jars came from the main burial chamber of the rock-cut tomb AS 68c that must have belonged to its owner, the supposed husband of Princess Sheretnebty. The shaft which is thought to once have been dug for the princess herself did not contain any canopic jars or their parts (Vymazalová in this issue), and therefore there is no opportunity to compare the two burials of the couple, as in the case of AS 67. The southern burial chamber of AS 67 is particularly interesting, for its walls were cased with white Tura limestone, and it was furnished with a beautiful white limestone sarcophagus. The limestone model vessels were the most beautiful of all those pieces known from Abusir South so far. They were perfectly crafted and smoothed. The state of the canopic jars deposited in this burial apartment is strangely contrasted by it. The canopics might have been recycled in this case, but if not, they must have been deposited there on purpose despite the fact that they were so badly preserved.

The adjacent rock-cut tomb, AS 68d, contained the shafts of members of the family of Nefer. His burial chamber was not cleaned completely, as the ceiling was unstable and pieces were falling down during excavations. Therefore, only model vessels situated close to the entrance of the burial chamber were taken out. The burial chamber of his wife, Neferhathor, however contained a set of perfectly made (two taller and two smaller), one would say brand new, canopic jars even with some original powdery substance inside.⁹ Another comparison is provided by the tomb of Neferinpu. The main shaft located behind the false door of the owner of that mastaba

contained two burial chambers, and therefore two sets of canopic jars. The canopic jars of Neferinpu were found even with a repaired breakage that clearly points to the fact of damage, unlikely to have been made during the process of production in the workshop.

Although the damaged and repaired jars give the impression of unsightly objects, they were probably understood as being more valuable than the nicer and newer pieces, which supports the previously mentioned interpretation of pre-burial use of canopic jars in a ritual.

Unfortunately, the installations used for the mummification process in the Old Kingdom have not survived (or no traces of them have been recognized so far), and therefore there is no chance of finding any evidence for the usage of canopic jars there. The canopics are generally to be found in no archaeological contexts, except for the burial chambers (and area of cemeteries when the jars were taken out by robbers and left outside).

If there is no archaeological evidence, there might have been some to be found within iconographical resources clarifying the pre-burial use of canopic jars. There are several instances where the shouldered jars are mentioned. These are for example, the scenes of stone vessel production (*e.g.* Kanawati 2007: Pl. 72). In these cases, they are often called *nmst* jars (Arnold – Pishikova 1999: Fig. 73). The term *nmst* may denote the canopic jar, but except for the similarity of their shapes, there is no other evidence to support it. In the scenes of stone vessel production, the shouldered jars are crafted together with bowls, jugs and cylindrical jars that were still in use during the Old Kingdom (Balcz 1932: 84–86). As these were used mostly for the sacred ointment, the shouldered jars in these representations may stand for the ointment jars, such as those in tomb equipment lists.

In other contexts, they make up part of the burial equipment. In this case, the shouldered jars are drawn together with cylindrical jars and jugs that represent containers of ointment (*e.g.* Altenmüller 1998: Tafel 98/4; Hassan 1975: Pl. XXIV). Sometimes their bodies are decorated by handles, which is a feature surviving from the Predynastic Period.¹⁰ The stone shouldered jars can be also found within scenes of wine production (Weeks 1994: Fig. 38). However, such evidence is quite rare, and it might be a mistake of the craftsmen who made the decoration of the tomb, as the wine production and storage is usually connected with handled pottery jars imitating the Levantine products, *i.e.* the combed ware (Moussa – Altenmüller 1977: Abb. 16).

All these examples of iconographical evidence of shouldered jars of similar shapes as canopic jars have definitely nothing to do with any ritual that would give us a reason for their restoration and burial in the tombs of higher officials. Since neither the archaeological, nor the iconographical evidence suggests a solution of the problem, the exact nature of pre-burial use of canopic jars (at least from Abusir cemeteries) must remain unknown.

Conclusions

Many of the Old Kingdom canopic jars from Abusir necropolis have revealed minor or major surface damage

and repair. Since their number is quite high, it does not seem to be a rare feature. Several possible explanations were discussed, and only one of them can be considered plausible:

1. The reason for the bad state of preservation of these limestone canopic jars did not necessarily dwell in the bad quality material.

2. Neither did mistakes in the production process, nor the use of less skilful craftsmen make repairs necessary.

3. It is rather improbable that the jars were recycled by the family of the deceased, whose tomb was looted.

4. Also the robbers who entered the burial chambers soon after the burial were not interested in taking the canopic jars with them – perhaps for the purpose of selling them to another person.

5. The canopic jars should have been recycled in another way. The character of damage and repair points to the usage of the jars – they are worn out. The most probable context of pre-burial usage is the mummification process, for the jars are traditionally connected with evisceration.

The discussion concerning the purpose of canopic jars in the Old Kingdom tombs and the steps in the process of mummification in this period has just started. Therefore, more research is necessary to answer these questions arising from future excavations. The phenomenon of damaged and repaired canopic jars of Abusir necropolis has created a puzzle that most likely points towards the possibility of their pre-burial usage in the mummification process – or a ritual of equal importance.

Notes:

- ¹ The author would like to thank Lenka Lisá, from the Institute of Geology, The Czech Academy of Sciences for a macroscopic study of the canopic jars of Khekeretnebtj kept today in the Náprstek Museum (P5562a, P5563a, P5564a, P5565a), as well as for remarks and ideas concerning the material used for the canopic jars production and their patches. I would also like to thank my colleague Jiří Janák, from the Czech Institute of Egyptology, for discussions and advice concerning my interpretation from the point of view of ancient Egyptian religion.
- ² The only two examples containing bandages of linen that may contain viscera known to the author of the study are the canopic jars of Ptahshepses from Saqqara (Derry 1947: 140), and the royal canopics of Pepi I (Labrousse 1996: 159–160). Unfortunately, no analysis have been done to find out the real nature of its contents.
- ³ There are many examples of repairs of stone vessels, as they were too precious objects to discard after the first breakage. The most common means of repair was by drilling small holes and binding the pieces together. For more information on repairs see Bakry (1969). Damage and repair on stone vessels are also recorded in the papyrus archive from the mortuary temple of Raneferef (Posener-Kriéger – Verner – Vymazalová 2006: 98–101).
- ⁴ The name of the owner of the mastaba is not clear. The casing with reliefs in the chapel was almost completely damaged, and the graffiti on the walls of the mastaba, shaft and in the burial chamber present several names. See also Bárta – Vymazalová – Dulíková *et al.* 2014: 20.
- ⁵ Plaster was commonly used as an adhesive since the early history of ancient Egypt (Bakry 1969: 48–50).
- ⁶ There are two lids of canopic jars coming from the tomb of Kaemneferet described by Eva Martin-Pardey as “Der Deckel ist am Rand stark beschädigt, Fehlendes ist z.T. modern in Gips ergänzt.” (no. 3848/2) and

“Der Deckel ist zu etwas mehr als her Hälfte erhalten, der Rest ist modern in Gips ergänzt.” (no. 3848/3). However, the patches of plaster visible in the enclosed photographs resemble to the repairs of the Abusir jars. Moreover, in case of 3848/2, only a part of the lid is repaired, which is improbable in case of work of modern restorers (Martin-Pardey 1980: 147–150).

- ⁷ The material of these canopic jars might be macroscopically described as fine microcrystalline white limestone/dolomite. The degree of dolomitization is difficult to set macroscopically. This type of material is quite suitable for the jar production, because of its relative softness. On the other hand to damage such material is not a question of common short term use. For instance, the rolling on stony surface would cause similar type of damage as found on the studied jars. The striking fact were the sharp marks of intensive mechanical cleaning inside the jar and the smoothed plaster/gypsum repairs on the jars surface.
- ⁸ An undisturbed Shaft 4 in AS 68d, which shall probably be dated to the end of the Sixth Dynasty, contained a set of canopic jars (388/AS68/2014) that clearly shows how could a craftsman make his work badly. Three of the four unusually short jars were wrongly modelled. Their bodies were too thinned in the lower part, and they needed to be remodelled using plaster. The surface plaster modelling of one of these three jars cracked and partly fell off showing the surface of the limestone vessel underneath. There is no hole, no surface damage. The plaster only hid a bad work of the craftsman concerning the shape of the vessel. The other two remodelled jars remain in perfect condition, and the modelling is almost invisible.
- ⁹ Unfortunately, to date no analysis has yet been made concerning the origin and nature of the contents of the canopic jars.
- ¹⁰ At that time the perforated tubular handles served a purpose; however, in the Old Kingdom they were practically used no more, and mostly remained without perforation.

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Abstract:

Archaeological excavations in the Abusir South officials' tombs have revealed several sets of canopic jars that bear traces of large surface damage and plaster patches filling the holes and chippings. Deeper research into the canopic jars of the Old Kingdom unearthed during earlier excavations in the area of Abusir yielded more examples, and therefore questions arose concerning the origins of this damage and subsequent repair.

The author of the present study brings to light the so far recognized evidence and outlines several paths of interpretation. The quality of limestone used for the production of all these canopic jars was not the reason for this damage, which would have occurred during the production process. Therefore, the author comes to the conclusion that they must have been used in a kind of pre-burial activity, most probably connected with mummification. Such activity thus caused the surface chippings, and the jars must have been restored (in one case twice). Later on, the jars were put into the burial apartment – all probably empty, as a symbol of *post mortal* treatment of the body, which probably did not include evisceration.

canopic jars – mummification – Old Kingdom – stone vessels – limestone

Lucie Jirásková (lucie.jiraskova@ff.cuni.cz)
Czech Institute of Egyptology, Faculty of Arts, Charles University in Prague