Under a Deep Blue Starry Sky

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As one of the last authors reviewed by W. J. Murnane who kindly sent me his final comments a few days before his death, I am delighted to present this tribute to his memory, a roving walk in the company of one of his favorite pharaohs, under a deep blue starry sky.¹

Among the finds from KV 55 recently exhibited in Munich and then returned to the Egyptian Museum in Cairo there was an inlay fragment of the ‘sky’-sign, slightly convex, in deep blue glass, adorned with yellow stars (fig. 1).²

This object was previously published by Reeves, and I have commented on its possible original location in tomb KV 55.³ The possibilities are:

A) the coffin,
B) an unknown or destroyed object from KV 55,
C) the canopic jars.

The coffin may be ruled out. Only one ‘sky’-sign was inserted at the end of the inscription and the inlay is still visible. It is made of deep blue glass without stars.⁴ Another possibility may have been the top of the same column where such a sign might be expected, but there is no room for it now and the fact that the starry fragment is slightly curved strongly suggests that it was not placed there. Moreover, it would have been surprising to find two identically-shaped inlays with such different details.

Option B: An unknown or destroyed object, is hardly plausible despite the fact that some inlays recovered from the tomb apparently belonged to items other than those already known. Since, as the authors of the catalog suggest, the deep blue signs formerly in Munich were part of

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¹ I wish to express my thanks to Amanda Dunsmore for her precious advice and improvements to the translation.
⁴ Munich 2001, front cover.
the nomen Amenhotep, I believe the fragment of the hieroglyph comes from the end of the right horizontal inscription on the outside under part of the coffin (inscription ‘C’). There, in the lacuna, was perhaps the formula to which the hieroglyph probably once belonged. The symmetrical formula gives however “Son of Re, living by Maat, lord of the crowns.” In the same way, the fragment of a clypeus from a ‘scarab’-sign is from part of a royal praenomen, despite the fact that its scale is slightly larger than expected for the known inscriptions from the coffin. However, all of these inlays and fragmentary inlays are easy to insert in the already known inscriptions from KV 55, opposite the starry ‘sky’-sign. This means that option C: the canopic jars must be considered seriously.

The problem, however, is that on each jar, in the location where this inlay should have been, there is a fragment of calcite that fills the channel of the right end part of the ‘sky’-sign. As Krauss has convincingly demonstrated, this fragment of calcite comprises part of a more ancient ‘sky’-hieroglyph. There is no evidence that the original ‘sky’-sign was inlaid, yet the channel looks too deeply cut for a hieroglyph to have been simply engraved. If this was the case, it would have been easier to sand back completely the inscription of Kiya, including the ‘sky’-sign, rather than replace it with a sliver of calcite. If it had been filled in such a way, it was probably because the original sign was also inlaid. If one compares the dimensions of the items, the results are as follows:

- **starry fragment:**
  - Length: 5.55 cm,
  - Width: 1.1 cm (0.68 cm for the ‘sky’ without the ‘corner’),
  - Thickness: 0.25 cm

- **calcite fragment:**
  - Length: 3.6 cm (but, Martin adds: “The channel was not continued for the entire length of the ‘heaven’ sign, but only for a distance of approximately 5.4 cm from its right end.”),
  - Width: 0.6 cm

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5 Munich 2001, p. 75, Kat. 63. The possibility that the nomen of Akhenaten was written Amenhotep in the emended part of the coffin is not to be completely discounted if this last change occurred during Tutankhamen’s reign. However, the inlaid signs newly executed in the altered parts of the coffin present a wide range of materials and colors, opposite the signs belonging to the nomen Amenhotep apparently only worked in a deep blue, glazed material.


7 D’Akhenaton à Toutânkhamon, pl. XXXII, b, missing in δ. In the restored underside of the coffin, fragments of gold foils suggest the title “lord of the crowns” at the end of the formula, just before the cartouche, cf. Munich 2001, p. 104, Abb. 59.

8 Ibid., pl. XXXII, a.

9 Ibid., pl. XXX (g). Another possibility is that it belonged to a ‘heart-scarab’ composed of various elements.


11 Munich 2001, p. 78.


13 Ibid., p. 113. In fact, the channel had been cut all along its length, but was later sanded back, except for 5.4 cm on the right end.
The difference between the dimensions are at odds if one supposes that the space for the calcite inlay was the original location of the fragment. Nevertheless, it seems that all the calcite inlays vary in width from one jar to another and moreover, it seems that the plaster join is also of some thickness. If one allows a thickness of 0.04 cm for this join on both the upper and the lower sides, then the channel is about 0.68 cm high which may fit with the starry inlay. As for the length, it is noteworthy that the channel in which the calcite fragment was originally laid was about 5.4 cm, hence not so far from the 5.55 cm of the starry fragment. The remaining calcite inlays have apparently all been broken a few centimeters along the left side, probably when the colored inlays on the left were removed, leaving the channel empty there.

If we accept the possibility that the starry inlay comes from one of these jars, a scenario then arises: the removal of the right side of the ‘sky’-sign and its replacement with a calcite inlay, contemporaneous with the erasure of the titles and name of Kiya underneath, was carried out in the tomb and one fragment of the original inlay was ‘left’ in the tomb by the workers. Such a scenario seems hardly possible. Tomb KV 55 was not the best place for such work, even if hastily done. Moreover, logically speaking, the other changes to the funerary equipment of Kiya must also have been undertaken in KV 55. It is hard to imagine the insertion of a new uraeus on the jar stoppers and coffin, the cutting of a new false beard, new scepters, new inlays (items not immediately available in the Valley of the Kings) and the new engraving on gold foil inside the coffin, in such an inappropriate place. All these factors suggest that the changes to the canopic jars and coffin of Kiya, in order to adapt them for a king, were done in a workshop and not in the tomb.

We must then consider another scenario. The starting point is the shape of the right end of the starry fragment. Here, the ‘corner’ of the ‘sky’-sign is visible. If the ‘sky’-sign had only been cut out and replaced with a calcite inlay, this essential part of the hieroglyph would have been missing over the remaining inscription. It would have been necessary to add this ‘corner’ with another material (paint for example). It is then very possible that the workers preferred to re-insert this part of the hieroglyph with its starry decoration and to cut another fragment corresponding in length, in the middle part of the ‘sky’-sign rather than to bungle the work. The care they took in filling the empty space at the right end of the sign with a fragment of calcite, instead of simply filling it with some plaster, indicates that their intention was to perform a high quality change and not simply the erasure of Kiya’s hieroglyphs. Making a new ‘sky’-sign with parts of the former one, i.e., its “corner” elements, was presumably the obvious solution.

In this case, the presence of the starry inlay fragment among the items from KV 55 can only be explained by considering that the defacement of the remaining inscription (i.e., that which involved Akhenaten’s and the Aten’s names) and the sanding back of the ‘sky’-sign above it took place in KV 55. This possibility has, however, been challenged by Dodson, following a suggestion of Eaton-Krauss: “This erasure is normally linked with the removal of cartouches from the coffin and shrine found in KV 55, but I would prefer to see it as simply the final elimination of texts that were irrelevant to the jars’ final owner.”

“Regarding the erasures from the coffin and shrine, I am persuaded by Marianne Eaton Krauss that they did not take place within KV 55, but before they came to rest within that tomb.”

It is clear that if the deep blue sky from KV 55 actually belongs to one of the canopic jars, then Dodson’s theory falls short. It also becomes obvious that the defaced panel on the jars represents the last phase of the changes to this canopic equipment and that no other name was ever intended to be engraved. Moreover, in such a case, it would have been useless to remove the ‘sky’-sign and the Aten’s names. Once again, Dodson has a brilliant explanation for another succession of events:

“It is clear that their (i.e. canopic jars) inscriptions had been excised of portions relating to their former ownership by Kiya at an early stage; less certain is the date of the removal of the remainder of the panel of text, which bore the names and titles of Akhenaten and the Aten. It is not impossible that this could have been associated with the erasures seen on other items from KV 55, but the fact that the whole panel was removed, and not just the cartouches of Akhenaten, suggests that it was part of the preparation of the vases for their new owner. Perhaps new decoration was intended, but never carried out, or else inscribed in paint which has long since disappeared.”

It would seem, however, slightly paradoxical to erase the panel so carefully yet fail to engrave it, even roughly with a new name or to re-inscribe it so carelessly that the name has completely disappeared. It is furthermore stretching the eye of faith to deduce the existence of such a name from its complete absence.

Nevertheless, the fact that the whole panel has been defaced is not as surprising as Dodson would suggest. If only the names of Akhenaten had been erased and the Aten names preserved, then, from the Egyptian point of view, this canopic set would have been attributed to the Aten himself and the viscera inside would have necessarily belonged to him. One presumes that the ancient Egyptians were sadly less imaginative than Dodson and preferred simply to avoid any inconsistency by removing the whole text. The complete erasure of the panel appears in this way to be a successful attempt at depriving the jar’s owner of his names and status. I am more persuaded to think that the Egyptians succeeded in making the last owner anonymous rather than to believe that they failed to attribute the set to an alleged new owner.

As a diagram is often more illuminating than any statement, figures 2-7 show the different steps of work on the inscribed panel, as suggested above.

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15 Ibid., p. 59, n. 67.
Fig. 2: original inscription from the canopic jars of KV 55 with the titulary of Kiya (drawing by the author based upon the reconstruction of Krauss, *MDAIK* 42 (1986), p. 72, Abbildung 7).

Fig. 3: first step of the erasure of the name of Kiya. Her titulary is hacked out and the ‘sky sign is cut.
Fig. 4: second step of change: the right corner of the 'sky'-sign is moved to the left and a calcite fragment is inserted in its place.

Fig. 5: reconstruction of the inscribed panel of the canopic jars from KV 55 in accordance with the identity of the last owner.
Fig. 6: last step of change, the remaining royal cartouches are erased and the ‘sky’-sign removed. Part of the calcite inlay is broken during the process. The names of the god were removed as well to prevent any confusion (the Aten could not have viscera).

Fig. 7: view of the panel after the last change. A fragment of the ‘sky’-sign was left in the tomb and recovered later by the excavators.
We can be quite sure that the original owner of the canopic jars with stoppers was Kiya.\(^{17}\) It is also almost certain that the coffin was originally made for Kiya.\(^{18}\) It is now also highly probable that the last owner of these items was Akhenaten and no other. For the canopic jars, if the starry fragment of "sky"-sign actually belonged to one of the panels, it is now strong evidence. Concerning the coffin, it is also possible to argue that it belonged to Akhenaten, on the basis of two points: 1) the epithet "great in his lifetime" after the defaced cartouche of the king in bands (B) and (C) and 2) the reading "Waenre" instead of "beloved of Waenre" on band (D).

1) The formula "great in his lifetime," \textit{inscribed on re-cut areas of inscriptions} (B) and (C) on the coffin\(^{19}\) concerns \textit{only} Amenhotep IV/Akhenaten and is \textit{never} found in original inscriptions after the name of another pharaoh.\(^{20}\) It must be remembered that Amenhotep IV/Akhenaten included this epithet in his own cartouche in the tomb of Kheruef\(^{21}\) and that this

\(^{17}\) R. Krauss, \textit{MDAIK} 42 (1986), pp. 67-80. The comments of A. Dodson (\textit{GM} 132 [1993], pp. 22-23 and n. 17) following an observation by G. T. Martin (\textit{BdE} 97/2 [1985], p. 112) about the poor fit of the stoppers on the jars is unconvincing. This is often the case and as he acknowledges, there is often ancient and modern confusion in attributing the stoppers to the jars. Given the very constant iconography of Kiya and making allowances for the fact that the faces are thin, these masterpieces may actually belong to the early stages of Amarna art and depict very probably Kiya in her youth, despite A. Dodson, \textit{The Canopic Equipment of the Kings of Egypt} (1994), p. 58, based on presupposed views of the Amarna style.


\(^{20}\) There are only three cases where Amenhotep III is supposed to be ë(t(w) m ëf\(w\)=f“great in his lifetime”:
   1) the legend of a statue depicted in the tomb of Huya at Amarna (C. E. Loeben, "No Evidence of Coregency - Two Erased Inscriptions from Tutankhamen’s Tomb," \textit{Amarna Letters} 3 (1994), p. 108, n. 30),
   2) the door of the gilded shrine from KV 55,
   3) some reliefs at Soleb.

   The case for 1) is, in fact, a misinterpretation by C. E. Loeben and the statue concerned, whose cartouches are defaced, actually depicts Akhenaten, despite the fact that it looks isolated among other statues of Amenhotep III. The king is ën[w] m Ms\(t\).t and queen Tiyi, depicted to the side, is called “king’s mother,” which is not the case when she is depicted along with Amenhotep III who is never ën[w] m Ms\(t\).t, cf. N. de G. Davies, \textit{The Rock tombs of El Amarna}, Part III, \textit{The Tombs of Huya and Ahmes}, with an appendix on the Greek Graffiti by S. de Ricci, Archaeological Survey of Egypt Memoir 15 (London: Egypt Exploration Society, 1905), pl. X.

   2) On the door of the gilded shrine from KV 55 the name of Amenhotep III, written with the goddess Maat in the praenomen and with the nomen Amenhotep, is clearly a secondary emendation in red ink (cf. T. M. Davis [G. Maspero, G. E. Smith, E. R. Ayrton, G. Daressy and E. H. Jones (coll.)], \textit{The Tomb of Queen Ti\(t\)} [London: Constable and Co., Ltd., 1910], pp. 13-14). Despite the fact that Daressy forgot to mention the emendation (p. 13), it is clear from his reading of it on p. 13 where he claims that the praenomen of Amenhotep III, written with the goddess Maat, occurs only on reworked parts.

   3) At Soleb too, it appears that the names of Amenhotep III have been recut over that of Amenhotep IV after the death of the last pharaoh. M. Schiff-Giorgini, J. Janssen and J. Leclant have been misdirected by the fact that the nomen has been corrected twice and the praenomen once. It is clear from the published photographs that the first names were Neferkeperure-Waenre Amenhotep netjer-heqa-Waset, emended to Neferkheperure-Waenre Akhenaten during Akhenaten’s reign and changed to Nebmaatre Amenhotep heqa Waset after the restoration, cf. M. Schiff-Giorgini, "Soleb," \textit{Kush} 6 (1958), pp. 82-97; J. Janssen, in M. Schiff-Giorgini, "Soleb, Campagna, 1958-59," \textit{Kush} 7 (1959), p. 168; M. Schiff-Giorgini, C. Robichon and J. Leclant, \textit{Soleb I, 1813-1963} (Firenze: Sansoni, 1965), p. 131, n. 3 (see too pp. 78-79, doc. 11, G; pp. 103-104, doc. 20, I; pp. 105-106, doc. 20, L and n. 18; p. 113, doc. 20, M); J. Leclant, mentioned in W. J. Murnane (\textit{Ancient Egyptian Coregencies}, SAOC 40 [1977], pp. 154-155); J. Leclant, “Soleb,” \textit{LÄ} V (Wiesbaden: O. Harrassowitz, 1984), col. 1076. In one of his last e-mails, W. J. Murnane told me that he had reached the same conclusion.

\(^{21}\) Epigraphic Survey \{The\} (in cooperation with the Department of Antiquities of Egypt), \textit{The Tomb of Kheruef - Theban Tomb 192}, OIP 102 (Chicago: The Oriental Institute of the University of Chicago, 1980), pls. 8-9.
king is sporadically described simply as “the one who is great in his lifetime.” The fact that this formula has been inserted in an emended part of the inscription on the coffin from KV 55 demonstrates indisputably that it refers to the last addressee of the coffin.

2) After checking with May Trad, and thanks to the authorization of Dr. Mamdouh Al-Damaty and the kind collaboration of Mr. Sabri from the Cairo Museum, the fragment of inscription ‘D 6’ from the inside part of the coffin lid from KV 55 appears to bear the following signs, (fig. 8), which corresponds to the formula:

Despite the poor state of preservation, it is clear that the last two signs are ~~~~ with the ~~~~ simply written as a streak, as in all other parts of this text. Unfortunately, the gold sheet is scrunched up over the ~~~, but the space between ~~~D and the body of the ~~~-sign is about twice as high as that between the ~~~ and the ~~~~. This indicates that something existed over the rectangular part of the ~~~. A ~~~-sign and a ~~~~-sign may be ruled out as no trace of them can be seen there. The more plausible solution for filling the space is the now illegible seal and tie of the papyrus-sign that G. Daressy saw in 1910. It is noteworthy that all the signs are very spaced out, excluding the possibility of any short writings of words, and giving the feeling that the engraver tried to enlarge the length of the inscription to fill the whole space. Looking at the phrase from a grammatical point of view, the only possible solution is the last reading:

(A) Daressy 1910  (B) Daressy 1916  (C) Engelbach 1931  (D) Gabolde 1998  (E) Idem & M. Trad 2003

22 M. Sandman, *Texts from the time of Akhenaten*, Bibliotheca Aegyptiaca 8 (Brussels: Fondation Égyptologique Reine Élisabeth, 1938), p. 31, line 14; p. 40, line 4; p. 66, line 14; p. 171, line 9 and, probably, p. 79, line 9. For the three texts where this epithet seems to concern Amenhotep III, see D’Akhenaton à Toutânkhamon, p. 232, n. 1675. A. H. Gardiner, in “The so-called Tomb of Queen Tiye,” *JEA* 43 (1957), p. 21, n. 3, suspected that the epithet aA(w) m aHaw=f was inscribed once after the cartouches of the Aten. Unfortunately, his reference: “Amarna I, pl. 7,” does not show any evidence of that. The only other king whose “duration of life” was referred to in the literature is the pharaoh Sisebek of Papyrus Vandier, see G. Posener, *Le Papyrus Vandier*, Bibliothèque Générale 7 (Cairo: Institut Français d’Archéologie Orientale, 1985), passim.

My suggestion of 1998 to read the end of the formula $m\tilde{a}-h_{rw}$ is clearly wrong and I must apologize for having misled the authors of Munich’s exhibition catalog who accepted my proposal. Engelbach’s reading \underline{\underline{\ldots}} can be explained by the fact that the two horizontal lines of the \underline{\underline{\ldots}} pass slightly over the vertical edge of the sign on the left hand side, but actually less than one millimeter. The various translations give the following results:

A) $W^\tau(w)(\sim n) R^\tau$: “Wa(en)re the Great” makes no real sense and supposes the absence of $(\sim n)$. (Such an occurrence occurs only in one of the papyri from Ghurob, but the close similarity of \underline{\underline{\ldots}} and \underline{\underline{\ldots}} in hieratic explains it fully.\(^{24}\)

B) $W^\tau(w) R^\tau ~ /mr(y) ~ t\beta$ makes no sense either and, here too, the absence of $(\sim n)$ should be noted.

C) $Mr(w)\sim n ~ W^\tau(w)(\sim n)-R^\tau$ appears to make sense and is generally accepted, but it presents one incorrect writing: $W^\tau(w) ~ R^\tau$ instead of $W^\tau(w)\sim n ~ R^\tau$, and an unattested relative form $Mr(w)\sim n$ which is never encountered with the epithet of “king” Ankh(et)kheperure … Neferneferuaten … The epithets of this ruler are always written without $(\sim n)$: $Mr(y)(.t) ~ W^\tau(w)\sim n-R^\tau$ or $Mr(y)(.t) ~ Nfr-hpr.w-R^\tau$ (and never $Mr(y)\sim n ~ 3h(w)\sim n ~ Itn$).\(^{25}\) The fact that one $(\sim n)$–sign is missing and another is unnecessary strongly suggests another solution.

D) $W^\tau(w)(\sim n) R^\tau m\tilde{a}-h_{rw}$ is clearly to be ruled out after checking the original, despite the fact that the formula $m\tilde{a}-h_{rw}$ is encountered twice in the foot end inscription after the name of the king.\(^{26}\)

E) $W^\tau(w) ~ R^\tau$ makes sense, is grammatically correct and presents no mistakes. The only peculiarity is the unusual writing of $W^\tau(w)$ with a rare ‘arm’-sign as phonetic complement\(^{27}\) and a ‘papyrus-roll’-sign unattested until now for the nickname of Akhenaten, but found sometimes in Middle Kingdom literature.\(^{28}\) Such a developed writing can be explained here by the noticeably wide spacing between glyphs due to the need to fill extra space.

The end of the inscription (D) reads then:

\(^{24}\) A. H. Gardiner, “Four papyri of the 18th dynasty from Kahun,” Z ÄS 43 (1906), p. 29, l. 14 and l. 20.
\(^{25}\) For the misreading $Mr(y)\sim n ~ 3h(w)\sim n ~ Jtn$ instead of $3h(y).t-\sim n-\sim h(j)=s$, see n. 68 below.
\(^{26}\) D’Akhenaton à Toutânkhamon, p. 248. This reconstructed epithet on band (D) is to be emended on pp. 252-253 of the same publication as well as in Das Geheimnis des goldenen Sarges (Munich, 2001), p. 39, p. 108, and “La parenté de Toutânkhamon,” BSFE 155 (2002), p. 47.
\(^{27}\) For this writing in hieroglyphic inscriptions, see N. de G. Davies, The Rock Tombs of El Amarna, Part IV, The Tombs of Penthu, Mahu and others, Archaeological Survey of Egypt Memoir 16 (1906), pl. XXI.
\(^{28}\) R. van der Molen, A Hieroglyphic Dictionary of Egyptian Coffin Texts, Probleme der Ägyptologie 15 (Leiden, Boston and Köln: E. J. Brill, 2000), p. 87, where the writing is specifically associated with the qualitative verb $w^\text{ef}$ “(to) be alone/unique.”
“(O) Lord of heaven, I am one whose heart is living in its (right) place. May thou contemplate Waenre every day without ceasing!”

Such a text unequivocally makes Akhenaten the last owner of the coffin. The fact that Akhenaten is referred to once in the first person singular, and another time in the third person singular is simply due to the fact that the relationship of Akhenaten/Kiya in the original inscription has been adapted, with some difficulty, to the relationship of the Lord of Heaven/Akhenaten in the emended text.

To sum up, the changes in the inscriptions on both the coffin and canopic jars strongly suggest that the last owner of these items was Akhenaten and no other. Some indirect evidence is also to be found in the text of the Restoration Stela of Tutankhamen (CGC 34183). In line 26 it is written concerning Tutankhamen and after claiming that this king is the real, eldest son of Amun, that “taking care of the father who bore him, his kingship is the kingship of (his) father Osiris.”

This allusion to the god Osiris is completely isolated in the text. The formula translated here as “taking care of,” nd ḥr in Egyptian, is obviously related to the pious behaviour of a son, considered to be Horus, toward the body of his dead father Osiris. It is exactly the role of Harendotes whose name includes the same wording. Reading the text literally, this indicates that Tutankhamen buried his actual father who became Osiris and consequently inherited the kingship of his father. As some seals from tomb KV 55 were stamped with the name of Tutankhamen and given that Tutankhamen is most probably the son of Akhenaten, it is logical to deduce that the king buried in KV 55, and significantly entitled “Osiris Neferkheperure” on at least two of the magical bricks, is Akhenaten, the father of Tutankhamen.

Such a scenario provides a possible answer to the pertinent question of Dodson: “Why was a king of the Amarna Period placed in an elaborately altered woman’s coffin rather than his own?”

This is not an isolated case as another king of the XVIIIth Dynasty was buried in a sarcophagus previously cut for a woman and later altered for him, namely Thutmosis I. The strange story of the mummy of Thutmosis I is in many points directly parallel to that of the king from KV 55. Thutmosis I was first buried by Thutmosis II in an unidentified tomb. Later,
during Hatshepsut’s reign, his body was re-buried in tomb KV 20 of Hatshepsut.\textsuperscript{36} It is noteworthy that for this second burial Hatshepsut altered her own sarcophagus for her father and ordered a new one to be cut for herself.\textsuperscript{37} A few years later, Thutmose III decided to remove Thutmose I from KV 20 and to bury him in a new tomb, KV 38,\textsuperscript{38} with a new sarcophagus,\textsuperscript{39} a new coffin,\textsuperscript{40} a new canopic chest\textsuperscript{41} and, apparently, non-royal canopic jars adapted by adding uraei to the stoppers,\textsuperscript{42} as in KV 55.

The motivation to remove this mummy is obvious: It was to strengthen the legitimacy of the ruling king by acting as Horus acted for Osiris.\textsuperscript{43} For Hatshepsut, it was a good way to legitimate her claim to the throne and for Thutmose III it was an opportunity to annul the legitimacy of Hatshepsut and to assert his own rights. It is interesting to note that, in each case, part of the funerary equipment had to be renewed, presumably because the original equipment was considered as ‘corrupted’ by the rites performed previously.\textsuperscript{44} In any case, a new sarcophagus or coffin and a new canopic equipment appeared necessary.

The post-mortem adventures of Thutmose I provide an ideological backdrop to the burial in KV 55. Here again, the most persuasive explanation is that Tutankhamen buried his father to annul the legitimacy of Akhenaten’s female successor, probably Merytaten,\textsuperscript{45} who originally buried her father in the Royal Tomb at Amarna\textsuperscript{46} and to strengthen his own claim to the throne.
The only obstacle to such a reconstruction of events is the alleged age at death of the body found in the coffin. More recent studies propose an age between 18-25 years at death, necessarily ruling out Akhenaten. The discrepancy between epigraphic data and forensic ones had already been discussed by Germer\(^\text{48}\) and Robin.\(^\text{49}\) Strangely, egyptologists are generally more likely to consider the coroner more reliable than the epigraphist. Nevertheless, a careful examination of the methods used for assessing age at death for ancient Egyptian bones clearly shows the great uncertainty of the forensic data. The results are hampered by three major problems:

1) the subjective nature of data collection.  
2) the appropriateness of standards used for comparison.  
3) the statistical value of the method.

Concerning the first point, a remarkable example is provided by Filer in her description of the body from KV 55: “Elliot Smith states that the limb bones are fully fused and consolidated, but as noted above, this is definitely not the case.” As this is a question of direct observation, it is impossible for the non-specialist to obtain the facts. The photograph published by Harrison\(^\text{50}\) seems to confirm Filer’s results, but still there is some reluctance to accept that Elliot Smith was completely wrong in stating that the bones were fully fused as he paid great attention to these details.

Regarding the second point, it must be remembered that the standards used for comparison are mostly modern and European. There are no reliable standards for the ancient Egyptians as there is not, for the 15-30 year old population, one mummy whose age at death is indisputably known through epigraphic data or strong deduction. We have no idea about the impact of diet, climate, genetic inheritance, diseases or social status on the growth curves of ancient bones. These aspects are generally dismissed — probably to avoid a difficult interpretation— by scientists as indicated in the following text:

“There is no reason to believe that today’s standards are not generally applicable to any sample of Homo sapiens, making due allowance for environmental influences such as nutrition, health and disease, endocrinic balance, and so on; in effect it may be concluded that the ancient Egyptian aged in bone and tissue much as today; it may be assumed that they experienced the same maturational changes in essentially the same order as present-day populations.”\(^\text{51}\)

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50 “An Anatomical Examination of the Pharaonic Remains Purported to be Akhenaten,” JEA 52 (1966), pl. XXI, 3.  
However the problem of assessing secular changes in the rate of maturation was apparent to Smith in 1912 when he reflected upon his earlier assignment of 25 years as the age at death for Thutmosis IV. Smith states:

“But during the eight years that have elapsed since I examined this mummy, and, on the assumption that the data given in all text-books of Anatomy in reference to this matter were reliable, estimated his age as 25 years, I have examined the epiphysis of the iliac crest in several thousands of Egyptian skeletons. In the course of this investigation I have discovered that in the Ancient Egyptians it was not an uncommon event for the union of the posterior end of the epiphysis cristae to be delayed; and that the corresponding part of the sulcus often persisted well on into the middle age. Hence at the present moment I feel much less certain of the youth of Thutmosis IV than I did in 1903 before I had learned to distrust the data given so positively in treatises on Anatomy.”

This conclusion is notably in conflict with the opinion of Harrison: “(…) the epiphyseal union has been found generally to occur earlier in Egypt than modern European and American standards dictate.”

In many cases, when the forensic data is in total disagreement with the epigraphic data, the estimated age at death is younger than what can be deduced from historical sources, giving some support to the opinion of Smith. The following cases are of peculiar interest:

— Thutmosis III, whose mummy is clearly identified by the original funeral shroud made by Amenhotep II, and who reigned for 54 years is credited with 35-40 years at death.

— Amenhotep III, whose mummy is identified by a label on the shroud, and who certainly reigned for 38 years, is credited with 30-35 years at death.

— Ahmes-Nefertary, whose mummy is not clearly identified (in her huge coffin, another mummy, that of Ramses III, was also found, but the mummy attributed to her clearly dates from the beginning of the XVIIIth Dynasty), gave birth to a child before year 18-22 of Ahmosis and she also outlived Amehotep I. If we assume that she was 14 years old in year 20 of Ahmosis’ reign (more recently a year 22 has been attested, but this is not necessarily his last), she was at least 37 years old at the death of Amenhotep I, who reigned for 21 years. Her mummy is credited with 30-35 years at death.

— Ramses III, whose mummy is positively identified by the inscription on the shroud, was at least 15 years old in year 5 of his own reign, while going to war against the Libyans. Most egyptologists believe that he was in fact more than 30 at his accession to the throne. He reigned for 30 years and his mummy is estimated to be 30-35 years old at death. (Ibid., no. 64)

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55 Ibid., no. 22.
56 Stela of Thutmosis I, *Urk.* IV, 80, 3-4.
— For other mummies, like that of Amenhotep II, estimated to be between 35-45 years at death, the textual evidence gives a date at the very end of his estimated age (18 years at his accession and year 26 on a docket from his funerary temple, hence he must have been at least 44 years old).

These examples show that the age at death is very often under-estimated when compared to historical evidence. Currently, egyptologists prefer to consider that the ancient Egyptians confused the mummies during the re-wrapping and re-burial. But those who re-buried these royal mummies had at their disposal more information than the modern scientists and it is methodologically unwise to question first their reliability.

As there are now good reasons for suggesting that Amenhotep IV was about 9-10 years old at his accession to the throne and looked like a very fat young boy, unmarried and chaperoned by his mother, he was probably 26-27 years old when he died. Given the unreliability of statistics for bone growth, we can be certain that, although the estimated age of 18-25 years is the most probable case, the same statistics also suggest that estimates as low as 16 years or as high as 27 years cannot be discarded. They are simply less probable. An error of five years in the estimation of age at death of these very old and poorly preserved bones seems more probable than that the ancient Egyptians who buried the body in KV 55 were neglectful, careless or inconsistent in their work.

Looking at the alternative proposal for the body from KV 55, namely that it belongs to Semenkhkare, it becomes clear that this identification is not supported by any epigraphic evidence. This name has never been found in the tomb, and the formula “beloved of Waenre” which was thought to concern him clearly reads in fact only “Waenre.” Dodson’s theory, that Akhenaten buried his coregent Semenkhkare with ideologically atonist burial equipment in KV 55 because the traditional burial equipment of that king, later usurped by Tutankhamun, appeared too traditional, is based on prejudiced views. In fact, after alterations, the coffin in KV 55 was not atonist at all:

— The name of the Aten is carefully avoided on the re-cut parts, and when a god is alluded to, he is called nb p.t “Lord of Heaven” (inscription D) or Rˁ-Hr-ḥty, without cartouche (inscription F). This last mention is very significant as Rˁ-Hr-ḥty was excluded from the name of the god after year 14 and, after a temporary phonetic writing, was replaced by


60. Forthcoming article “Ce bon gros Amenhotep IV.” The main arguments are: the most ancient reliefs of Amenhotep IV depict him as a fat young boy with a short, wide neck and double chin (blocks from the X pylon at Karnak and Tomb TT 55 of Ramose). These characteristics are very recognizable on plaster portrait Berlin inv. no. 21299 from Amarna which, due to the shape of the mouth, cannot represent Amenhotep III “rejuvenated” as currently claimed, but depicts Amenhotep IV at the very beginning of his reign. The change in Amenhotep IV’s iconography in years III-IV reveals three phenomena: 1) characteristics of Barraquer and Simon’s syndrome, 2) elongation of the body and new sensual marks by the time of puberty, and 3) exaggeration of these characteristics due to the baroque style.


62. *D’Akhenaton à Toutânkhamon*, pp. 110-118. This suggestion was acknowledged by W. J. Murnane, “The End of the Amarna Period Once Again,” *OLZ* 96, no. 1 (2001), p. 14: “Since these changes in the Aten’s titulary can be more-or-less fixed in time by association with the persons buried in these sections (pp. 110-118), there emerges a
Ra-@oA-Axty to avoid the possible reading Hr “Horus,” of the falcon.63 It is clear then that it was impossible for this writing to be used between year 14 and year 17 of Akhenaten (lapses of time foreseen by Dodson for the burial in KV 55) and so it necessarily post-dates Akhenaten’s death.

— M\(\text{hfrw}\) legible on the foot end inscription of the coffin and on the magical bricks, is almost always avoided at Amarna for the king.64

— The magical bricks, which are a set with the coffin and canopic jars, mention the “Osiris king Neferkheperure true of voice” on two of the inscriptions.65 As these items were prepared at the time of burial (and not prepared in advance and stored),66 it is clear that Osirian beliefs had already been restored when the burial in KV 55 occurred, and consequently that Akhenaten was dead. Confirmation of this is to be found in the presence of seals mentioning Tutankhamen which indisputably attribute the burial to his reign.

— As Dodson acknowledges, the cartouches of the Aten, as well as those of Akhenaten were defaced on the panel of the canopic jars. Such defacement makes no sense if the panel had to be altered in an atonist way. It is totally paradoxical that the only visible traces of the alleged change on the canopic jars ordered by Akhenaten to make this equipment “atonist” is precisely the defacement of Akhenaten’s names and the Aten’s names.

Finally, there is one more point that makes Dodson’s reconstruction implausible. This is the fact that the royal funerary equipment altered for Tutankhamen never mentions Semenkhkare but only refers to the female pharaoh Ankh(et)kheperure … Neferneferuaten … This is clear by looking carefully at the pectoral Carter 261 p 1. The iconography of this object, with the goddess Nut deploying her arms and wings, is typically Osirian and the text, adapted from Pyramid Texts 777b and 1654, ensures that it was exclusively part of the funerary equipment. This object is consequently part of the burial equipment of a king who turned back to the traditional religion, as

date for the change to the Aten’s final name that is later than what has been assumed previously - i.e., between years 12 and 14, instead of years 9 and 11. Gabolde makes a plausible case for this new dating, which in turn can shed valued (and sometimes startling) light on other members of the royal circle and their monuments.” It is also considered with interest by M. Eaton-Krauss and R. Krauss in their review of D’Akhenaton à Toutânkhamon, by Marc Gabolde, BiOr 58 (2001), p. 92: “Er (Gabolde) macht wahrscheinlich, dass die jüngste Namensform erst nach Jahr 12 eingeführt wurde, und erschüttert damit eine scheinbare ägyptologische Sicherheit.”

63 It is clear that the last change in the name of the Aten was undertaken to avoid the mention of Hr, which may allude to the god Horus and Sw which may allude to the god Shu. But the words chosen in replacement were phonetically closer to the former ones: Hq\(\hat{\text{a}}\) with the same initial h and the same metric value, and swty jf(=y) (semi-cryptographic writing @) for swty) sounds nearly like sw nty.

64 The exceptions are four shabtis of Akhenaten for which I gave an explanation in D’Akhenaton à Toutânkhamon, pp. 254-255.

65 Despite H. W. Fairman’s comment (“Once Again the So-called Coffin of Akhenaten,” JEA 47 [1961], p. 37), the name of Akhenaten is legible on the two bricks he published. The signs for nfr-lpr(,w)-R\(\text{ê}\) are indisputable and those for W\(\text{ê}(w)-n-R\(\text{ê}\) are not so hard to deduce from the traces as Fairman claimed they were. Only the three plural strokes are hard to find on one brick.

66 It is clear that the magical bricks and the cutting of the niches were not part of the funerary equipment, but were part of the funerary ritual. For the niches, this is obvious by the fact that the decoration on the walls was often damaged by their cutting. For the bricks this is evident through their poor material and the rough character of the inscriptions. That they were molded, inscribed and consecrated as part of the ritual performed during the burial, is obvious by reading Chapter 137 of the Book of the Dead which is devoted to these bricks, cf. now A. M. Roth and C. H. Roehrig, “Magical Bricks and the Bricks of Birth,” JEA 88 (2002), pp. 121-139. A. Dodson acknowledged that the presence of Akhenaten’s bricks was “less easy to explain in terms of (his) reconstruction,” and his complicated reconstruction failed to be convincing, GM 132 (1993), p. 27, n. 56.
the scarab (Carter 256a), the golden mummy bindings (Carter 256b), the coffinettes (Carter 266g1-4), and the quartzite sarcophagus attest. The peculiarly legible enlargement of Carter 261 p 1 published recently\(^67\) allows a reading of the praenomen as "nh(t)-lypr.w-R\(^{-}\) mr(y.t)-w(h)-n-R\(^{-}\). The feminine ending is confirmed by the feminine epithet M3."-hrw following the cartouche. The nomen itself reads Nfr-nfr.w.-Jtn \(\dot{\text{z}}\).t-n-h(j)=s “Neferneferuaten – Beneficial for her husband (fig. 9).”\(^{68}\)

These praenomen and nomen show indisputably that this king was a female pharaoh other than the husband of Merytaten, Semenkhkare, who is doubtlessly male.\(^69\) As it is now certain that this queen-pharaoh returned to the polytheistic beliefs, it seems reasonable to identify her with the king mentioned in the graffito from the tomb of Pare (TT 139) dated from year III of Ankh(et)kheperure–Mer(yt)aten Neferneferuaten-Mer(ytaten), with a significant prayer to Amun.\(^70\) That this female pharaoh is also the original owner of the coffinettes 266g1-4 is proven by the (rare) occurrence of the feminine ending\(^71\) and, moreover, by the presence of the nomen Nfr-nfr.w.-Jtn \(\dot{\text{z}}\).t-n-h(j)=s in at least the coffinette of Selkis (Carter 266g, Selkis = JE 60691, line 7) (fig. 10).

The recent interpretation of this cartouche by Dodson,\(^72\) entirely inspired by the publication of Saleh and Beinlich\(^73\) is clearly wrong. Dodson failed to recognize the top of the second and fourth nfr-signs which can be clearly seen on both parts of the top of the ‘nh-sign, and so he wrongly placed the only nfr -sign that he identified. His alleged n-sign on the left part of his misplaced nfr-sign is then actually another misinterpretation, as only traces of a nfr-sign are clearly readable there. The same inaccuracies can be seen in Dodson’s interpretation of the cartouche in line 9 of the same coffinette where the alleged n-sign (in the horizontal stroke of the ‘nh-sign, so unrecognisable itself) and ‘solar-disk’-sign underneath are actually invisible. It

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\(^{68}\) M. Eaton-Krauss, *OLZ* 98 (2003), p. 47: “Enlargements of details that exceed the actual size of an object can sometimes be illuminating for specialists; a case in point is the detail of the pectoral Obj. no. 261p1 (p. 226) where traces of the original hieroglyphs in the cartouche now reading Tutankhamun confirm for sceptics Marc Gabolde’s reading of the epithet \(\dot{\text{z}}\).t n hj.s (‘beneficial for her husband’) for Neferneferuaten, the original owner of this piece of jewellery.”

\(^{69}\) D’Akenaton à Toutânkhamon, p. 213 and ns. 1531-1535.

\(^{70}\) *Ibid.*, p. 161 with references. It is noteworthy that the name “Semenkhkare” is always associated with the “Aten” cult and is never encountered with the material that post-dates the restoration of the traditional cults.

\(^{71}\) Carter 266g Neith, line 13, cf. H. Beinlich and M. Saleh, *Corpus der hieroglyphischen Inschriften aus dem Grab des Tutanchamun* (Oxford: Griffith Institute, 1989), p. 110. In the text from chapter 130 of the *Book of the Dead*, the king is \(\dot{\text{z}}\).t n hj.s in the formula “Turmoil is the abomination of the Osiris king Tutankhamen, Ruler of Southern Heliopolis, may she (sic) live for ever.” The context makes clear that ‘nh=it) is a 3rd fem. sing. ending and not a 2nd masc. sing. ending.


\(^{73}\) H. Beinlich and M. Saleh, *Corpus der hieroglyphischen Inschriften aus dem Grab des Tutanchamun* (Oxford: Griffith Institute, 1989), p. 116. The traces “seen” by A. Dodson are none other than those published by H. Beinlich and M. Saleh whose accuracy has already been questioned, particularly concerning the re-engraved inscriptions, cf. M. Eaton-Krauss, “‘A Falsely Attributed Monument,’” *JEA* 78 (1992), p. 335, comment on Carter 48h. It is noticeable that A. Dodson suggests no improvement to readings from this publication. The reconstruction of A. Dodson is hampered overall by his method of identification: the dotted line overlying the poor quality enlargements of the photograph actually hinders the reading rather than illuminating it.
follows that the alleged Jtn-hieroglyphs in the middle of the cartouche appear to be non-existent in both nomina of lines 7 and 9. The reconstruction of the epithet Mr(y)-3h(w)-- n- Jtn becomes consequently very uncertain. Moreover, this epithet never existed in the cartouche of any king and the formula used as a reference by A. Dodson from stela UC 410 is actually ill-timed.74 Besides the different order of the signs at the end of the cartouche,75 it is noticeable that the assumed hieroglyphs for Jtn are lacking in this text as well as in the other texts where this supposed name was suspected to have taken place (Carter 620 (41) and 620 (42)).76 More seriously, the apparent failure of Dodson to recognise the nomen Nfr-nfr.w-Jtn 3h(y).t--n-h(j)=s instead of the erroneous Mr(y)-3h(w)-- n- Jtn 77 is surprising as this new name is fully discussed in D’Akhenaton à Toutânkhamon, pp. 153-15778 and this reading has been acknowledged by Murnane,79 Krauss and Eaton-Krauss80 — three references that are conveniently ignored by Dodson. On the other hand, the reading of Semenkhkare’s nomen in the coffinette of Nephthys, line 26, is only based upon the fact that an indisputable ‘solar disk’-sign is observable at the beginning of this cartouche and on the assumption that “Since elsewhere nomina overlie nomina, one must assume this to be true in this case as well.”81 This last statement of Dodson’s, which apparently works for coffinettes is clearly untrue for other usurped objects: Carter 48h (JE 61517), where the cartouche (sic) replaces probably the nomen  

74 A. Dodson, ibid., p. 276, n. 5. For the reading, see D’Akhenaton à Toutânkhamon, p. 155.

75 On UC 410 the alleged -sign precedes the alleged -sign which would suggest a reading Mr(y)-n-3h(w)-- n- Jtn. But both signs are more likely to read and . There is only one case where the -sign (written ) is placed at the bottom of the cartouche, a stamped handle from Palestine, cf. O. Goldwasser, “A Cartouche of Semenkhkare from Canaan,” GM 115 (1990), pp. 29-32. It would have been very strange to find the -sign preceding Akhenaten’s nickname in the praenomen of “king” Ankhkheperure and, as on the same text, the same -sign is following Akhenaten’s alleged nomen in the nomen beginning by Neferneferuaten. This is another good reason to discard the readings Mr(y)-- n-3h(w)-- n- Jtn and Mr(y)-3h(w)-- n- Jtn.


77 A. Dodson, “The Canopic Coffinettes”; J. Von Beckerath, Handbuch der ägyptologischen Königsnamen, MÄS 49 (Mainz: Philipp von Zabern, 1999), pp. 144-145, 11.E.2. These texts are now attributed to “king” Nfr-nfr.w-Jtn 3h.t n h(j)=s.

78 That this publication was known to A. Dodson is attested by his comment: “Marc Gabolde has, in D’Akhenaton à Toutankhamon (Lyon, 1998), 214-5, attempted to dismiss these conclusions, but in doing so fails to address the totality of the traces. This paper is not the place to further address Dr Gabolde’s novel conclusions regarding Ankhkheperure.” I prefer to let the reader make up his own mind regarding the facts and “novel conclusions” in our respective publications, but the case for the royal name in the Selkis coffinette (Carter 266g = JE 60691) line 7 published here (fig. 10) shows clearly which author actually failed to address the totality of traces.

79 OLZ 96 (2001), p. 16.


81 A. Dodson, ibid., p. 276.
Neferneferuaten,\textsuperscript{82} and on pectoral Carter 261 p 1 (3) where one can find on the right: \[\text{Diagram 1}\] (sic) and on the left: \[\text{Diagram 2}\] (sic).\textsuperscript{83}

Interestingly, on two other objects from the tomb of Tutankhamen where this extract from Chapter 134 of the \textit{Book of the Dead} is engraved, the nomen occurs on one object and the praenomen appears in the same place on the other.\textsuperscript{84} This clearly demonstrates that there were no strict rules for the positioning of nomina and preanomina in the fragments from this funerary book and that $^\text{n}$\textit{nh.t-hpr.w-Rc}$ +$ epithets could have been placed where $\text{Twt-} ^\text{n}$\textit{nh-Jmn hq.j Jwnw sm^c}$ is now engraved. Lastly, the possibility that the nomen of Neferneferuaten was written with the rare writing of the object Kansas City 67-21, 5-6: \[\text{Diagram 3}\] cannot be totally ruled out. This means that the presence of the ‘solar disk’-sign at the beginning of the cartouche does not necessarily indicate that “Semenkhkare” was once written there. The fact that no traces of the $s$-sign, the $mn$h- sign, or the $k\beta$-sign, have ever been recognized by Dodson, encourages the author to remain very dubious of Dodson’s imaginative reconstructions of nomina since he fails to give traces of $jh$-sign, $n$-sign and $mr(y)$-sign and is able to concoct a non-existent \textit{Jtn} group in the alleged epithet $Mr(y)\sim n- jh(w)\sim n- Jtn$, of his false reconstruction of the end of the cartouche.\textsuperscript{86}

From the epigraphic evidence it now appears that the king buried in KV 55 is none other than Akhenaten whose age at death was approximatively 26-28 years. He was buried there by his son Tutankhamen to strengthen the rights of the last king to the throne. Semenkhkare has nothing to do with this burial nor with the usurped funerary equipment from KV 62 which concerns, as far as the inscriptions are legible, only the female king $\text{Nfr-nfr.w-Jtn jh.t\sim n-h(j)=s}$ who is probably none other than Merytaten herself.

\begin{itemize}
\item \textsuperscript{82} W. McLeod, \textit{Composite Bows from the Tomb of Tut\'ankhamun}, Tut\'ankham\'un’s Tomb Series 3 (Oxford: Griffith Institute, 1970), p. 11 and pls. IV, XVII and XX, despite the opinion of J. R. Harris, “Akhenaten and Neferneferuaten in the tomb of Tut\'ankham\'un,” in \textit{After Tut\'ankham\'un, Research and excavations in the Royal Necropolis of Thebes}, ed. C. N. Reeves, Studies in Egyptology (London and New York: Kegan Paul International, 1992), p. 61 and n. 82.
\item \textsuperscript{83} J. R. Harris, \textit{ibid.}, p. 61 and n. 97.
\item \textsuperscript{84} Cf. A. Piankoff, \textit{Les Chapelles de Toutankhamon}, MIFAO 72 (Cairo: Institut Français d’Archéologie Orientale, 1952), p. 15, column 13 $\text{Nh-hpr.w-Rc}$ and p. 59, column 30 $\text{Twt-} ^\text{n}$\textit{nh-Jmn hq.j Jwnw sm^c}$.
\item \textsuperscript{86} During a friendly discussion in Grenoble (2004), A. Dodson told me that the very careful analysis of J. P. Allen of the cartouches first engraved in the coffinettes has convinced him that the traces of the name of “Semenkhkare” are now less probable than he formerly claimed and are possibly non-existent. For a \textit{retractatio} see now A. Dodson and D. Hilton, \textit{The Complete Royal Families of Ancient Egypt} (London: Thames & Hudson, 2004), p. 285, n. 11. Strangely, the discovery of the epithet $\text{th(y).t\sim n-h(j)=s}$ is credited to J. P. Allen while in fact Allen’s examination of the coffinettes simply confirmed all my correct readings previously denounced fiercely by Dodson.
\end{itemize}
Fig. 9: nomen from pectoral Carter 261 p 1: top, from left to right: enlarged detail scanned from the photography of T. G. H. James and A. De Luca, *Toutankhamon* (Paris: Gründ, 2000), p. 227; traces of defaced and re-engraved cartouches; traces of re-engraved cartouche; traces of defaced cartouche; bottom, from left to right, drawing of traces of both defaced and re-engraved cartouches; traces of re-engraved cartouche; traces of defaced cartouche; reconstruction of original cartouche.
Fig. 10: cartouche in Selkis coffinette (Carter 266g = JE 60691) line 7: top: scan from catalogue *The Treasures of Tutankhamun*, Metropolitan Museum of Art, 1976, cat. no. 45, between plates 26 and 27; middle left: traces of both first and second engraved names; bottom left: traces of second engraved name; middle right: traces of first engraved name; bottom right: reconstructed first name taking advantage of the reading of Carter 261 p 1.