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*Some Thoughts
on the Mummification of King Tutankhamun*

The burial of King Tutankhamun has attracted more than its fair share of attention, as it is the only New Kingdom royal burial to have been found virtually intact. Initially, studies focussed on the myriad of glittering treasures found within the tomb. Soon, however, attention turned to interpreting the conundrum of Tutankhamun's role as restorer of the religious status quo with the reinstatement of the hegemony of the god Amun-Re.¹ Once unwrapped and the jewels and amulets removed, the same amount of attention was not lavished on Tutankhamun's body itself after the initial investigation. D.E. Derry and Saleh Bey Hamdi carried out this investigation, but unfortunately never published their findings, although a brief summary of these appeared in H. Carter's book on the discovery of the tomb.² Luckily Derry's unpublished report was preserved, and this saw the light of day in 1972 when the dentist F. Leek undertook its publication.³ Leek had been involved with the examination of the mummy in 1968 as part of the investigative team under the direction of R.G. Harrison,⁴ and his observations allowed him to *gather information at first hand*.⁵ Ten years subsequent to Harrison's examination, J. Harris, another dentist, from Michigan, studied the body within the burial chamber and x-rayed the head in order to obtain a series of high quality images of the teeth,⁶ and blood analysis was also carried out on a piece of bone.⁷

In recent years, however, there has been an increase of interest in what human remains can tell us, particularly in tandem with more advanced and less damaging technological resources, and Tutankhamun's mummy has once again come under scrutiny after a hiatus of nearly 40 years. In 2005, Tutankhamun's mummy was examined using a trailer-mounted movable multi-slice CT unit.⁸ Subsequently Tutankhamun was sampled and examined,

* I would like to take the opportunity to respectfully dedicate this article to Professor Karol Myśliwiec who has inspired and taught me a great deal about Egyptology, including the value of hypothesizing. This article is inspired by the Professor's openness to ideas and his willingness to indulge in educated conjecture as a way to open the discussion to a variety of ideas, and thus, I would like to dedicate this piece of rampant speculation to him in the hopes that it will raise questions and feed the discussion about funerary beliefs in the time of Tutankhamun.

¹ Vast amounts of ink has been spilt on this topic. For a recent bibliography see A. DODSON, *Amarna Sunset*, Cairo 2009 and for a good overall treatment of the subject matter, see N. REEVES, *The Complete Tutankhamun*, London 1990 [= *Complete Tutankhamun*], as well as M. EATON-KRAUSS, *The Burial of Tutankhamen (1)*, *KMT* 20/4, 2009–2010, pp. 34–47, and W.R. JOHNSON, *Tutankhamen-Period Battle Narratives at Luxor*, *KMT* 20/4, 2009–2010, pp. 20–33. N. Kawai's unpublished doctoral dissertation (2005, Johns Hopkins University), *Studies in the Reign of Tutankhamun*, is also a key source and – of course – the original publication of the tomb, H. CARTER, A.C. MACE, *The Tomb of Tut-ankh-Amen*, London 1923–1933 [= *Tut-ankh-Amen*]. My thanks to Dr. A.M. Dodson for reading and commenting on a draft of this article.

² D. DERRY, *Report on the Examination of King Tutankhamen's Mummy*, [*in:*] H. CARTER, *The Tomb of Tut-ankh-Amen II*, London 1927 [= *Tut-ankh-Amen II*], pp. 155–156.

³ F. LEEK, *The Human Remains from the Tomb of Tut'ankhamūn*, Oxford 1972 [= *The Human Remains*].

⁴ R.G. HARRISON, A.B. ABDALLA, *The Remains of Tutankhamun*, *Antiquity* 46, 1972, pp. 8–14.

⁵ LEEK, *Human Remains*, acknowledgements.

⁶ J.E. HARRIS, E.F. WENTE, *An X-Ray Atlas of the Royal Mummies*, Chicago 1980 [= *X-Ray Atlas*].

⁷ R.G. HARRISON, R.C. CONNOLLY, A.B. ABDALLA, *Kinship of Smenkhkare and Tutankhamun affirmed by seriological micromethod*, *Nature* 224, 1965, p. 325.

⁸ Z. HAWASS, *Tutankhamun and the Golden Age of the Pharaohs*, Washington, DC 2005; Z. HAWASS, M. SHAFIK, F.J. RÜHLI *et al.*, *Computed Tomographic Evaluation of Pharaoh Tutankhamun, ca. 1300 v. Chr.*, *ASAE* 81, 2009, pp. 159–174.

together with a group of royal mummies, as part of a larger DNA study,⁹ the first of its kind. The results of these studies are still under discussion.¹⁰

THE MUMMIFICATION OF TUTANKHAMUN

One of the notable focal points with regard to the mummy is not only the body itself, the health of the dead king, or causes for his death,¹¹ but also the curious way in which he was mummified.¹² Several anomalies are apparent if one compares his mummification to those of earlier Eighteenth Dynasty and subsequent Nineteenth Dynasty rulers:¹³ the resin in the cranium, the position of the arms, the evisceration cut, the position of the penis, the question of his heart, the issue of the (now?) missing ribs,¹⁴ and the amount of resins and oils used in the embalming.¹⁵

Unlike other earlier rulers of the Eighteenth Dynasty, the embalmers poured resin into Tutankhamun's excerebrated skull on two separate occasions, as is evidenced by the two layers visible in the x-rays taken by R.G. Harrison.¹⁶ A variety of scenarios might explain this: the first deposit was considered insufficient so a second one was added;¹⁷ forgetfulness on the part of the embalmers; what was considered an incorrect location for the resin as it did not sufficiently cover the most fragile portions of the cranium, which then had to be corrected; two phases of embalming; a change in what had been the 'norm', at least insofar as can be determined, for mummies until the reign of Thutmose IV, and after the reign of Seti I.

Tutankhamun's arms were found bent at the elbows and the forearms laid, left above right, roughly at right angles, across his belly, with the elbows jutting out slightly (Burton

⁹ Z. HAWASS, Y.Z. GAD, S. ISMAIL *et al.*, Ancestry and pathology in King Tutankhamun's family, *JAMA* 303, 2010, pp. 638–647.

¹⁰ E.D. LORENZEN, E. WILLERSLEV, King Tutankhamun's family and demise, *JAMA* 303/24, 2010, p. 2471; author reply pp. 2473–2475; C. TIMMANN, C.G. MEYER, King Tutankhamun's family and demise, *JAMA* 303/24, 2010, p. 2473; author reply pp. 2473–2475; C. TIMMANN, C.G. MEYER, Malaria, mummies, mutations: Tutankhamun's archaeological autopsy, *Tropical Medicine and International Health* 15.11, 2010, pp. 1278–1280; J. MARCHANT, Curse of the Pharaoh's DNA, *Nature* 472, 2011, pp. 404–406; EAD., *The Shadow King: The Bizarre Afterlife of King Tut's Mummy*, Boston 2013.

¹¹ For an overview of published information concerning these issues see F. Rühli and S. Ikram, *in press*.

¹² An initial report is to be found in LEEK, *Human Remains*, while a variety of writers address some of these, either singly or together, with the most recent review being that of B. HARER, New evidence for King Tutankhamen's death: his bizarre embalming, *JEA* 97, 2011, pp. 228–233.

¹³ G.E. SMITH, *The Royal Mummies*, CCG, Cairo 1912 [= *Royal Mummies*]; HARRIS, WENTE, *X-Ray Atlas*.

¹⁴ This article will not dwell unduly on the question of the missing ribs as this author has addressed this elsewhere in some detail: D. FORBES, S. IKRAM, J. KAMRIN, Tutankhamen's missing ribs, *KMT* 18.1, 2007, pp. 50–56.

¹⁵ The thick black substance that has yet to be tested to identify its components. It damaged the body by burning it and causing some degree of spontaneous combustion (LEEK, *The Human Remains*, *pass.*) often seen in mummies that are poorly prepared, and was the reason that Carter *et al.* had to remove the body from the coffin and free it of its accoutrements using chisels and knives and consequently damaging the body dramatically.

¹⁶ LEEK, *The Human Remains*, p. 17, Pls XXI, XXI.

¹⁷ HARER, *JEA* 97, 2011, p. 229.

photos 0769, 0780a, 0787, 0790).¹⁸ This pose is not the norm for New Kingdom royal mummies, particularly those dating from the Nineteenth to the Twenty-first Dynasty¹⁹ as their forearms lay diagonally across the body, reaching for the shoulders (see below for discussion). One might ask as to why the arms are positioned thus – was it part of an ongoing tradition, did it actually not matter all that much, or was it deliberate?

The evisceration cut was a diagonal, running from the navel toward the left iliac crest, rather than running parallel to and above the iliac crest.²⁰ It was also larger than the norm. This rather indiscreet cut is rare, if not unique (none are known to the author from the New Kingdom). Does this point to an (initial?) embalming carried out by a non-expert,²¹ or is it a deliberate and significant departure from preceding practice?

The penis was mummified erect, as opposed to lying flaccid.²² To this author's knowledge, this is almost a unique example of a penis being mummified at an angle of approximately 90° to the body.²³

Furthermore, a massive amount of resinous material was poured over the body, making it very difficult for the excavators and anatomists to free it from its wrappings, amulets, and decorations, so as to study the body, and also contributed to the humidity in the coffins that ultimately worked to the detriment of the mummy's preservation.²⁴ Although the royal mummies of the New Kingdom are anointed with oils, resins, and beeswax, they tend not to be almost drowned in copious amounts of the black substance²⁵ that covered the boy-king and affixed him to his coffin. The application of lavish amounts of resin-oil mixtures on top of coffins (as well as on bodies) is more typical of burials from the Third Intermediate Period onward.²⁶ This oleo-resin was poured liberally over Tutankhamun's coffins as well as the body. As H. Carter writes in his notes of October 24, 1925, *the most part of the detail is hidden by a black lustrous coating due to pouring over the coffin a libation of great quantity. As a result this unparalleled monument (coffin) is stuck fast to the interior of the second coffin – the consolidated material of the libation filling up the space between the two*

¹⁸ For the Burton images: <http://www.griffith.ox.ac.uk/tutankhamundiscovery.html> (accessed 25 August 2012).

¹⁹ There is a faint possibility that when these mummies were rewrapped in the Twenty-first Dynasty, they might have been modified, although this is unlikely as the dried limbs were most probably far too brittle to reposition without damage.

²⁰ LEEK, *The Human Remains*, p. 12, Appendix I, Pls XIII, XIV.

²¹ If this were the case it would suggest that Tutankhamun died some way away from the Nile Valley and had no access to proper embalmers, although this is rather unlikely.

²² LEEK, *Human Remains*, p. 12, Pl. XIII.

²³ The Ptolemaic mummy, PUM II, was said to have been mummified with an upright penis, but the photograph shows that it is centered between the legs, parallel to them, rather than at right angles (A. COCKBURN *et al.*, *A classic mummy: PUM II*, [in:] A. & E. Cockburn (Eds), *Mummies, Disease and Ancient Cultures*, Cambridge 1980, p. 55, Fig. 4.9).

²⁴ CARTER, MACE, *Tomb of Tut-ankh-Amen I*; LEEK, *Human Remains*; D. FORBES, *Tombs, Treasures, Mummies: Seven Great Discoveries of Egyptian Archaeology*, Sebastopol, CA 1998 [= *Tombs, Treasures, Mummies*], pp. 430–443.

²⁵ As this has not been analyzed (to this author's knowledge) it is impossible to identify it beyond calling it black 'goo', or a resin-oil (wax?) mixture.

²⁶ For example: Beit el-Kritleya/Gayer-Anderson Museum, Cairo No. 1717; Nesitanebetasheru in Weston Park Museum Sheffield J 93.1283.

*coffins almost to the level of the lid of the third one.*²⁷ Is this due to ignorant embalmers? A desire to cover up some injury on the body – but then why drown the coffins as well? Is this a new funerary ritual, or a renewal of a very ancient one?

Additionally, according to the results of the CT-study the sternum, portions of the ribs (front and back), and vertebrae are missing.²⁸ *The ends of the fragmented ribs were clearly cut by a sharp instrument at different sites. This could not have been the result of an intra vitam trauma... It is likely that these chest lesions were due to the forced unwrapping by Carter's team in 1925... Other such fractures of most likely modern origin have also been found on other areas of the body.*²⁹ The missing ribs are a subject of some controversy as some scholars believe that Carter was responsible for their absence,³⁰ while others argue that the mummy might have been disturbed unofficially between the time that it was first exhumed and before R.G. Harrison's examination,³¹ and a few believe that the king had been buried thus and had been missing the ribs as they had been damaged (as part of the cause of death?) and the embalmers had neatly sawn off the ends of the bones.³² This author still thinks that the destruction of the ribs might be a result of an unofficial interaction with the mummy and that sharp tools can indeed cut mummified bone quite neatly where it is embedded in resins and hardened linen.³³ Indeed, several of the royal mummies that were robbed show clean cuts in their bones,³⁴ and neat severing of bits of mummy is visible in many a museum collection and even on mummies abandoned at sites (e.g., as observed by this author in a series of heads in the Duckworth Collection in Cambridge, some mummies held in the Medelhavsmuseet in Stockholm, as well as on sites in Upper Egypt). This has also been demonstrated by Zaki Iskander,³⁵ as well as the authors own experiences, some as recent as September 2012. Additionally, photographs of the mummy from the 2005 investigation indicate impressions of ribs on the resin-oil-linen mass on the king's thorax. At this point, this seems to be yet another continuing, currently-irresolvable point of debate.

B. Harer's examination of the CT-scans also highlights two³⁶ further anomalies in Tutankhamun's mummy that should be addressed (it should be noted that this author has seen only a selection of these images):³⁷ the presence of the diaphragm and the absence

²⁷ See <http://www.griffith.ox.ac.uk/tutankhamundiscovery.html> (accessed Aug.–Nov. 2012) for diary entries. Also, one should remember that the foot of the outermost coffin was too large for the sarcophagus and was cut down, with the cut covered with unguent, perhaps to disguise the error (see CARTER, Tut-ankh-Amen II, p. 90).

²⁸ HAWASS, SHAFIK, RÜHLI *et al.*, *ASAE* 81, 2009, p. 163.

²⁹ *Ibid.*, p. 163.

³⁰ *Ibid.*, n. 18.

³¹ FORBES, IKRAM, KAMRIN, *KMT* 18/1, 2007, pp. 50–56.

³² HARER, *JEA* 97, 2011, pp. 228–233.

³³ Contra *ibid.*, n. 5.

³⁴ SMITH, *Royal Mummies*, pp. 21, 28, 37.

³⁵ Nasry Iskander personal communication, and his photos of a mummified head that has been neatly sawn through vertically.

³⁶ He actually mentions three others, but one of these three, an absence of packing in the pelvis, is not visibly supported by the Burton images or the 1968 observations and radiographs.

³⁷ Dr. Zahi Hawass who took the lead in the 2005 study is currently preparing a monograph entitled *The CT-Atlas of the Royal Mummies*, which should contain many more images than have thus far been made public (see HARER, *JEA* 97, 2011, nn. 1, 3).

of the heart. Interestingly, the initial publication of the CT results remarked on neither of these.³⁸

According to B. Harer,³⁹ Tutankhamun's diaphragm is present and intact. Generally this organ was cut through in order to reach the lungs and to remove them for separate embalming.⁴⁰ If it is indeed intact, then this can support the argument for a chest injury that obviated the need for the diaphragm's destruction during the removal of the lungs. However, the shape, position, and location of the evisceration cut itself might mean that it was not necessary to cut through the collapsed diaphragm – and if the frontal skeleton were absent, with the chest a gaping (open?) hole from which one can reach down to remove even the stomach and intestines, then why bother with an embalming cut at all?

The absence of the heart is far more serious.⁴¹ This organ was a key component for the successful resurrection of the body after it had been weighed against the feather of Maat.⁴² However, some of the publicly available CT-scans⁴³ do show a space or absence which might have once been where the heart was located. If one were to argue that the ribs and sternum were damaged between 1926 and 1968 when the bead collar was removed, then the heart might have also been inadvertently removed then.⁴⁴ If the heart had been lost by the embalmers, it would be likely that they would make some effort to provide a stand-in, made from linen and resin, or some other material, as is seen when extremities are lost in other mummies,⁴⁵ though doubtless this would be done discreetly. If the heart were lost due to the manner in which Tutankhamun died, then there is even more reason for a significant (and visible) heart substitute to have been provided, unless the heart was deliberately removed for a more sinister purpose, or was tied in to a novel method of mummification with a slightly different theological/ideological stress than that used before.

³⁸ HAWASS, SHAFIK, RÜHLI *et al.*, *ASAE* 81, 2009.

³⁹ HARER, *JEA* 97, 2011.

⁴⁰ G.E. SMITH, W.R. DAWSON, *Egyptian Mummies*, London 1924 [= *Egyptian Mummies*], pp. 88–91; S. IKRAM, A. DODSON, *The Mummy in Ancient Egypt*, London 1998 [= *The Mummy*], pp. 118–121. However, it should be remarked that one female mummy from KV 35 retained her diaphragm (and heart), although the lungs had been removed (SMITH, DAWSON, *op. cit.*, p. 94).

⁴¹ It should be noted that in x-rays it is sometimes difficult to identify the heart. According to W. Dawson and P.H.K. Gray, *In almost every mummy of all periods the heart is found to be present, though occasionally, through careless manipulation, it was severed and removed along with the other thoracic viscera. It is curious that the radiographs generally show no heart-shadow, but as the heart was much reduced in size by shrinkage, and as it usually lies directly over the spine, its image would be small and is probably obscured by the shadow of the spine* (IDD., *Catalogue of Egyptian Antiquities in the British Museum I: Mummies and Human Remains*, London 1968, p. X). However, this should not be the case with the CT that has more refined imaging processes.

⁴² SMITH, DAWSON, *Egyptian Mummies*, p. 146; S. IKRAM, *Death and Burial in Ancient Egypt*, London 2003, pp. 23–25; J. TAYLOR, *Death and the Afterlife in Ancient Egypt*, London 2001, p. 36.

⁴³ See especially HAWASS, SHAFIK, RÜHLI *et al.*, *ASAE* 81, 2009, Fig. 13.

⁴⁴ Clearly it is not unknown for embalmers to sometimes mistakenly remove the heart; one of the earliest scholars of mummification, Thomas Pettigrew, mentions that one of the mummies that he examined has no heart (ID., *A History of Egyptian Mummies*, London 1834, p. 59).

⁴⁵ Restorations on mummies are not uncommon, and include Manchester mummy 1770, Lady Nesitnebt-awy, and various others, cf. IKRAM, DODSON, *The Mummy*, pp. 126–128, Fig. 136; SMITH, DAWSON, *Egyptian Mummies*, Fig. 69.

To ensure a safe resurrection, in case the heart was damaged, a heart scarab inscribed with Spell 30B from the Book of the Dead was a crucial component of funerary amuletic jewellery, with the first such preserved royal example is that of the Seventeenth Dynasty king Sobekemsaf, now in the British Museum (EA 7876).⁴⁶ Such amulets come from a number of Tanite burials of the Third Intermediate Period,⁴⁷ and, despite to the paucity of intact royal burials, one can only assume that these amulets remained a constant feature of royal funerary equipment until the end of the Ptolemaic era.

Tutankhamun appears to have neither the heart intact, nor a scarab specifically placed on the left side of the chest that would serve as a substitute and insurance for a safe passage to the hereafter. Clearly its absence is not due to tomb robbers, as they did not violate the king's body (as far as we can ascertain from the evidence).⁴⁸

Additionally, neither Burton's photographs nor Carter's narrative record a traditional style of heart scarab located directly over the heart – some critics could argue that if it existed, Carter spirited it away, although there is absolutely no evidence for such an act, and one that would have to take place before a group of witnesses who were all engaged in unwrapping the mummy. Could the absence of the heart and the lack of a heart scarab over it have something to do with a different manifestation of funerary belief rather than a bungled embalming or a stolen object?

It should be noted, however, that the king's funerary mask had a pendent scarab made of black resin and suspended on a beaten gold wire (Carter card 256q, JE 61977) that nestled between the king's hands, *crossed over the breast, which hold the flail and the crook*,⁴⁹ which situationally could have taken the place of the heart scarab (Carter card 256q) – although it was inscribed with Book of the Dead Spell 29B rather than 30B.⁵⁰ However, Spell 30B appears on the 'scarab of hard green stone' (269, A. (4) in Carter's

⁴⁶ http://www.britishmuseum.org/explore/highlights/highlight_objects/aes/g/green_jasper_heart_scarab.aspx (accessed 25 August 2012).

⁴⁷ D.A. ASTON, *Burial Assemblages of Dynasty 21–25: Chronology – Typology – Developments*, Vienna 2009, pp. 39–86.

⁴⁸ REEVES, *The Complete Tutankhamun*, pp. 208–210; FORBES, *Tombs, Treasures, Mummies*, pp. 529–547. Of course, one can paint an unlikely but lurid picture of Tutankhamun's body being ravaged shortly after his burial, with the robbers (political opponents?) being caught in the act, summarily dispatched, and a hasty job being carried out by priests who patched up the violated body with lavish amounts of resin and oil, and replaced as many of the funerary jewels as they could. This penny-dreadful scenario does satisfactorily explain the absence of ribs, heart scarab, and the liberal application of oils and resins. Also, it should be noted that many of the bodies in DB/TT 320 were hacked up, probably as a result of ancient robberies, although there is much discussion about when these occurred, as is evidenced by the lively (and continuing) debate headed primarily by E. Graefe and K. Jansen-Winkel (E. Graefe, pers. comm. and Id., *Über die Goldmenge im alten Ägypten und die Beraubung der thebanischen Königsgräber*, *ZÄS* 126, 1999, pp. 19–40; E. Graefe, G. Belova (Eds), *The Royal Cache TT 320: A Re-Examination*, Cairo 2010; K. JANSEN-WINKELN, *Die Plünderung der Königsgräber des Neuen Reiches*, *ZÄS* 122, 1995, pp. 62–78).

⁴⁹ Carter notes, October 28, 1925.

⁵⁰ H. BEINLICH, M. SALEH, *Corpus der hieroglyphischen Inschriften aus dem Grab des Tutanchamun: mit Konkordanz der Nummernsysteme des "Journal d'Entrée" des Ägyptischen Museums Kairo, der Handlist to Howard Carter's catalogue of objects in Tut'ankhamūn's Tomb und der Ausstellungs-Nummer des Ägyptischen Museums Kairo, Oxford 1989 [= Corpus]*, p. 88.

list; JE 61948), integrated within a large pectoral (Carter list 261m, Burton photo 1134),⁵¹ which is inscribed for Tutankhamun. This last was found in the Treasury, some distance from the king's body, but close to his canopic chest (something normally placed in the burial chamber itself). Unfortunately the paucity of intact royal tombs makes it impossible to ascertain the locations of objects (other than the traditionally located heart scarab) bearing this spell, so one cannot tell if this green scarab is unusually situated with regard to the king, although its integration with the pectoral separates it from the run-of-the-mill heart scarabs that one expects to find.

DISCUSSION

Might some (or all?) of the anomalies in Tutankhamun's mummification (the mass of black material, the erect penis, the absence of the heart and heart scarab, the unorthodox embalming cut) actually be deliberate manifestations of theological and ideological reasons rather than a result of hasty/inadequate embalming or a mangled body that needed to be disguised? Of course, this is only speculation, as stated at the start of this article.

If these anomalies are deliberate, what might be the thoughts behind them? Again and again H. Carter repeats in his notes and his publication of the tomb⁵² that the king in his various coffins was being shown as Osiris – and indeed this states what Egyptologists often take as a fact: the living king was Horus, and the dead king was Osiris, and it was thus for all kings. But perhaps for Tutankhamun, this was being emphasized more than for his predecessors as he (and his immediate successors) were embracing and rejuvenating all aspects of traditional Egyptian religion. Perhaps Tutankhamun was also following the ideas of Amenhotep III in emphasizing, in a manner acceptable to Egyptian theological norms, the real divinity of the king who ruled as Horus in his lifetime and as Osiris in death.⁵³

Indeed, the north wall of Tutankhamun's burial chamber emphasizes the king's unequivocal transition into Osiris: Tutankhamun is shown as a fully-fledged Osiris – not simply a wrapped mummy – with Ay performing the 'Opening of the Mouth' ceremony upon him.⁵⁴ This representation of the king as Osiris is unique in the Valley of the Kings: other tombs show the king being embraced by Osiris or offering to him (numerous examples, particularly from the reign of Ay onward), but none show a deceased king as Osiris, although texts do identify the king as Osiris even while he makes an offering to that god (e.g. Horemheb (KV57), Seti I (KV19)).⁵⁵

⁵¹ BEINLICH, SALEH, *Corpus*, pp. 95, 120–121.

⁵² H. CARTER, *The Tomb of Tutankhamun* (Introduction by John Romer), London 1983, pp. 191–192.

⁵³ Tutankhamun emulated Amenhotep III further by emphasizing his links with the divine during his lifetime, albeit in a more traditionally theologically acceptable manner: the faces of many divine statues such as the Khonsu statue from the Great Temple of Amun at Karnak (CG 38488), the colossal statue of Amun at Karnak (and others usurped by Horemheb), smaller Amun statues with the king's face (JE 38049, CG 38002, Ny Carlsberg Glyptothek ÆIN 35), a calcite sphinx (the king as Horakhty?) from Karnak (Luxor J 49), and the king as Hapi (British Museum EA 75); further details can be found in REEVES, *The Complete Tutankhamun*, p. 27.

⁵⁴ K.R. WEEKS *et al.*, *The Treasures of the Valley of the Kings*, Cairo 2001 [= *Treasures*], pp. 150–157.

⁵⁵ Antechamber I in PM I², 568; WEEKS, *Treasures*, pp. 180–181, 203.

Although most scholars agree that it is unlikely that tomb KV 62 was cut for Tutankhamun, who might have intended WV 23 as his intended sepulchre – a tomb that ultimately became his successor Ay's burial place⁵⁶ – all can probably agree that the decoration in KV 62, limited though it is, is indubitably tailored specifically for Tutankhamun,⁵⁷ with Ay acting as heir presumptive in his role as *sem* priest.

Some of the anomalies in Tutankhamun's mummification could fall within the purview of Osirian identification. The erect penis evokes Osiris at his most powerfully regenerative moment, and is a feature of 'corn-mummies', the quintessential symbols of rebirth and resurrection. These are a common funerary object, albeit in varying forms, in tombs starting (slowly) from the Third Intermediate Period onward, and coming into their own during the Late Period.⁵⁸ It should be noted that although the New Kingdom 'germinating Osiris' or 'Osiris beds' (such as the one with germinating barley found in the Treasury, JE 62702, Carter 288a, and a similar item in KV 57)⁵⁹ might be related to the later 'corn mummies', though the former lack the ithyphallic nature of the latter. In this case, these objects clearly have regenerative powers tied in with the resurrection of the deceased as an Osiris in the Afterlife.

The mass of oils and resins applied to Tutankhamun's body might also allude to the black colour associated with Osiris as lord of the land of Egypt, dark with the rich soil of the inundation, and the source of fertility and regeneration.⁶⁰ This is an echo of the life-size black guardian striding statues of the king and his *ka* (JE 60707 and 60708). Even the resins themselves, imported from Lebanon/Syria might indirectly evoke the time that Osiris spent in Levant, encased in a pillar. Possibly the absence of the heart fits into the identification of Tutankhamun as Osiris – Osiris was divided up and his heart taken from

⁵⁶ There is nothing in this tomb to suggest that it was not made for Ay; however, if it had just started being cut when Tutankhamun died, there would be nothing to indicate that it had been meant for him. For recent discussions on this topic, see EATON-KRAUSS, *KMT* 20.4, 2009–2010, pp. 34–47 and EAD., *The Burial of Tutankhamen* (2), *KMT* 21/1, 2010, pp. 18–36.

⁵⁷ H. CARTER noted that the last thing to be done in terms of tomb preparation was the painting of the tomb (CARTER, *Tut-ankh-Amen II*, pp. 26, 104). Building upon this, it has been suggested by R. MITCHELL that the paint still might have been damp when the tomb was sealed, and this was the source of the mould on the tomb's walls. He says: *We're guessing that the painted wall was not dry when the tomb was sealed*, (<http://www.seas.harvard.edu/news-events/press-releases/tut-tut-microbial-growth-in-pharaohs-tomb-suggests-burial-was-a-rush-job> (accessed 27 August 2012)). It should be noted that though the paint might indeed have still been damp at the time of sealing the tomb, it was not necessarily the source of the mould. It is more likely that the mould is from water seepage, as posited by H. SZCZEPANOWSKA, A.R. CAVALIERE, *Tutankhamen's Tomb – A Closer Look at Biodeterioration*, Preliminary Report, [*in:*] A. RAUCH, S. MIKLIN-KNIEFACZ, A. HARMSSE (Eds), *Schimmel – Gefahr für Mensch und Kultur durch Mikroorganismen; Fungi, A threat for People and Cultural Heritage through Micro-Organisms*, Stuttgart 2005, pp. 42–47.

⁵⁸ M. RAVEN, *Corn Mummies*, *OMRO* 63, Leyden 1982, pp. 7–38.

⁵⁹ See Griffith Institute website for 288a; T.M. DAVIS, *The Tombs of Harmhabi and Touatânkhamanou*, London 2001 [= *Harmhabi and Touatânkhamanou*], p. 105.

⁶⁰ It is interesting to note that Amenhotep III's mangled body had been restored with resinous masses stuffed under the skin (SMITH, *The Royal Mummies*, p. 49). It is tempting to speculate that Tutankhamun's body had been compromised after its original burial, and then restored and interred with most of his grave goods and jewels (upon his body) in antiquity – a more successful reburial than those of the Twenty-first Dynasty, particularly as there was no (or little) accompanying theft of gold. However, the limestone chips that filled the corridor rather argue against this – unless they were put in to thwart further robberies.

his body and buried at Athribis – it is unclear if it was restored properly to his body; maybe for a god it was less necessary?⁶¹ At any rate, Tutankhamun was equipped with at least one artefact inscribed with Spell 30B to take the responsibility of the heart and to ensure a safe passage to the Afterworld.⁶²

Tutankhamun's arm position might also feed into this construct. The forearms of Amenhotep I (CG 61058) are detached, but were clearly crossed as the elbows are flexed, although the precise position is unclear. Those of Thutmose II (CG 61066)⁶³ and Thutmose III (CG 61068) are high on the chest, as are those of the kings from the Nineteenth Dynasty onward (save Siptah (CG 61080), whose forearms are placed parallel to one another, reminiscent of, but not identical, to Tutankhamun's situation). However, those of Amenhotep II (CG 61069), Thutmose IV (CG 61073) are crossed much lower down, leaving more of the chest clear, as does Tutankhamun's pose. Unfortunately, one cannot determine the original arm position for Amenhotep III (CG 61069) or that of the body in KV55 (CG 61075), while the bodies of Ay and Horemheb are not yet identified.⁶⁴ Could Tutankhamun's arm position be intended to give the body a silhouette with more pronounced elbows, as is seen in images of Osiris, including the Osirid figure on Tutankhamun's tomb walls and the Osiris bed found in the tomb.⁶⁵

The unorthodox embalming cut is harder to explain away – but could it not be a symbol of Seth's butchery of the body of Osiris? Similarly, the two resin deposits in the skull are also difficult to explain, with no clues found in texts related to Osiris or embalming rituals that are known to this author.⁶⁶

⁶¹ I am grateful to Dr. R. Jasnow for drawing my attention to H. BEINLICH, Die "Osirisreliquien". Zum Motiv der Körpergliederung in der altägyptischen Religion, *AA* 42, Wiesbaden 1984, pp. 22, 26, 39–40, 69–71, 77, 255; and Dr. Mark Smith for sharing the reference: J. QUACK, Resting in pieces and integrating the Oikoumene. On the mental expansion of the religious landscape by means of the body parts of Osiris, [in:] J. Quack, C. Witschel (Eds), *Religious Flows in the Roman Empire, Orientalische Religionen in der Antike*, Heidelberg 2012. Other sources which detail the disposition of Osiris's body parts are to be found in É. CHASSINAT, Le mystère d'Osiris au mois de Khoiak I–II, *Le Caire* 1966–1968; H. BRUGSCH, Das Osiris-Mysterium von Tentyra, *ZÄS* 19, 1881, pp. 77–111; V. LORET, Les fêtes d'Osiris aumois de Khoik, *RecTrav* IV, 1883, pp. 31–33; Id., Les fêtes d'Osiris au mois de Khoik, *RecTrav* V, 1884, pp. 85–103; H. GRESSMANN, Tod und Tod und Auferstehung des Osiris nach Festbräuchen und Umzügen, *AltOr* 23/3, 1923, pp. 1–40; while G. GRIFFITHS, *The Origins of Osiris and his Cult*, Leiden 1980, remains the standard work on the start of the Osiris cult.

⁶² It should be noted that in many of the published x-ray images of the Pharaohs, the heart is not easy to discern, and that in some instances mummies, not necessarily royal, seem to have lost their hearts (e.g. the so-called Thutmose I (CG 61065), see the images in.

⁶³ For images of the royal mummies see SMITH, *Royal Mummies, pass.* Of course, it might be argued that they were repositioned when rewrapped – however, it should be noted that significant manipulation would cause breakage. For arm positions also see: P.K.H. Gray, Notes Concerning the Position of Arms and Hands of Mummies with a View to Possible Dating of the Specimen, *JEA* 58, 1972, pp. 200–204.

⁶⁴ Horemheb may be represented by disarticulated bones found in KV 57 (DAVIS, Harmhabi and Touatânkhamanou, p. 105; G.T. Martin and R. Walker, personal communication).

⁶⁵ The so-called royal arm position with the forearms crossed over the breast is found commonly in Nineteenth and Twentieth Dynasty kings; there is, as noted above, significant variation in Eighteenth Dynasty kingly arm placement, and also in that of the bodies of the two Pinnudjems of the Twenty-first Dynasty.

⁶⁶ J.-C. GOYON, *Rituels funéraires de l'ancienne Égypte: le rituel de l'embaumement, le rituel de l'ouverture de la bouche, les livres des respirations*. Introduction, traduction et commentaire, Paris 1997, and S. SAUNERON, *Rituel de l'embaumement Pap. Boulaq III, Pap. Louvre 5.158*, *Le Caire* 1952.

Carter's diary (November 18, 1925) also point out another significant feature in the wrapping of Tutankhamun's body that supports: (4U) (4V) *Upon the top of the head of the King, was an enormous pad some ... centimetres in height, of linen wads and bandages wrapped in the manner of a modern surgical head bandage. This was of a conical form and in its shape was suggestive of a crown. The linen was in this case in far better preservation than any hitherto found upon the mummy. Its purpose is obscure, though possibly it either represented the form of the crown of Osiris (the mummy being necessarily made in his semblance), or was merely a pad intended to fill up the space that otherwise would have been left empty in hollow of the headdress of the mask. The former explanation seems for the moment to be the more probable.*⁶⁷ Alas, the mummies of other kings from TT 320 were all rewrapped, thus it is not possible to establish if Tutankhamun's 'crown' was a normal or a unique feature. However, if the cloth were merely padding, one might expect to see it in other burials (both royal and elite) as a head protector, although there seems to be no parallel to this form; other head protecting bandages are arranged around the head in a halo-like manner.

Thus, taking all the evidence into consideration, perhaps Carter's emphasis in his notes during the unwrapping and examination of the mummy is more correct than even he thought: the king was indeed being shown as Osiris, more than was usual in royal burials. One can speculate that at this delicate historical/religious time, it was thought that the usual modes for the transformation of the king were not sufficient, and so the priest-embalmers prepared the body in such a way so as to literally emphasize the divinity of the king and his identification with Osiris. Hence the brutal evisceration, restored by the mass of oleoresin that also transformed the colour of his skin to Osirid black, the arm position that echoed the image of the king as Osiris on the walls, and the erect penis. Thus, this more literal transformation of the body ensured that Tutankhamun, Horus on Earth, was safely transformed into Osiris for Eternity.

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⁶⁷ See: <http://www.griffith.ox.ac.uk/tutankhamundiscovery.html>.