

AMARNA ROYAL TOMBS PROJECT • VALLEY OF THE KINGS  
Occasional Paper *No. 3*

THE DECORATED NORTH WALL IN  
THE TOMB OF TUTANKHAMUN (KV 62)  
(THE BURIAL OF NEFERTITI? II)

*By*

Nicholas Reeves, FSA

*With*

A Review of the Geophysical Data

*By* George Ballard, FRICS



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## ABSTRACT

This paper revisits an earlier discussion, *The Burial of Nefertiti?* (ARTP Occasional Paper No. 1), to consider in greater detail the painted north wall in the Burial Chamber (room J) of Tutankhamun's tomb (KV 62). The changes imposed upon this wall's three separate scenes are here identified and analysed, and the conclusions found to support the view that KV 62 – architecturally the sepulchre of a queen – had been both intended and employed for the burial of Nefertiti in her capacity as Akhenaten's heir, Smenkhkare-djeserkheperu. The manner in which this tomb's outer chambers were adapted and pressed into service for Tutankhamun's use a decade later – leaving its original occupant in place and undisturbed – is clearly established.

In a supplement to this study, George Ballard – a leading authority on the use of radar and other remote-sensing technologies in the investigation of historic buildings and structures – provides an independent review of the principal geophysical investigations carried out within and around KV 62 since 2015. Contrary to earlier assessments, Ballard is able to conclude that the data collected is both broadly consistent and essentially in line with archaeological indicators and expectations.



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*“Look and you will find it – what is unsought will go undetected”*  
– Sophocles



Frontispiece. North Wall of Tutankhamun's Burial Chamber, Scene 3  
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*This paper is peer-reviewed*

This study is for  
Yumiko Ueno  
黒子



# THE DECORATED NORTH WALL IN THE TOMB OF TUTANKHAMUN (KV 62)

## (THE BURIAL OF NEFERTITI? II)

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### INTRODUCTION

Four years ago, in a paper entitled *The Burial of Nefertiti?*,<sup>1</sup> I ventured to propose a new and far-

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\* An early version of this paper was presented in Cambridge (England), at the Fitzwilliam Museum conference *Reuse, Appropriation and Ownership in Ancient Egypt*, February 7-8, 2019, and for the invitation to participate I am grateful to Helen Strudwick. For significant input at various stages in its preparation I should like to thank George Ballard, Fabienne Haas-Dantes, Mamdouh Eldamaty, Tom Hardwick, Ray Johnson, Lily Jung, Adam Lowe, John H. Taylor and Yumiko Ueno. I am scarcely less indebted to Neville Agnew, Kara Cooney, Pearce Paul Creasman, Peter Gremse, Michael Habicht, Peter Hessler, Remy Hiramoto, Traugott Huber, Marianne Eaton-Krauss, Rolf Krauss, Jack Josephson, Konstantin Lakomy, Sue Lezon, Magda Saleh, Tetsuji Nishino, Jessica Papin, Denis Payne, Stephen Pollard, Francesco Porcelli, Scott Robinson, †Hirokatsu Watanabe, Cat Warsi, Kent R. Weeks, Charlie Williams and Lori Wong. Institutionally/corporately I should like to acknowledge Ägyptologie-Forum, Zürich, University of Arizona Egyptian Expedition, Factum Arte, Getty Conservation Institute, Griffith Institute, Oxford, Ministry of Antiquities, Egypt, National Geographic Society, Oriental Institute of the University of Chicago, Tokyo Broadcasting System (TBS) and Wilmer Hale. Responsibility for the conclusions here reached, and any and all errors, is mine alone.

<sup>1</sup> Reeves 2015a, in conjunction with which the present text should be closely read. See also Reeves 2015c and the important Revised Addenda and Corrigenda to Reeves

reaching interpretation of the architecture, decoration and attribution of the tomb of Tutankhamun (KV 62) (Fig. 1), prompted by the publication online of Factum Arte's high-definition, digital images of the Burial Chamber (J) scenes and physical wall-surfaces.<sup>2</sup>

My initial study argued three basic points:

(1) that, on the basis of the Factum Arte documentation, KV 62 is likely to contain further, as yet unexplored areas located behind plastered- and painted-over blockings within the north and west (and conceivably south) walls of room J (Fig. 2);

(2) that the prospect of a northern corridor-continuation (y) plausibly identifies KV 62's basic architecture as that of an L-shaped corridor tomb with rightward turn – a style of sepulchre known to have been employed by Egyptian queens (see Fig. 33);

(3) that, in its initial version, the north wall decoration of room J had been prepared for a woman identified by specific details in the painting as Nefertiti – the wife, co-regent and successor of Akhenaten; a lady who seemingly occupies still the hidden burial apartments of KV 62 which this decorated wall had been employed to close-off.

In the present paper I return to this subject-matter, to consider in greater detail the evidence of the critical north wall decoration.<sup>3</sup> For the painting's present

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2015a at the end of this paper (which incorporates and supersedes Reeves 2015b).

<sup>2</sup> <http://www.highres.factum-arte.org/Tutankhamun/> (accessed July 13, 2019).

<sup>3</sup> For independent assessments of the north wall, drawing upon Reeves 2015a but working with a very different *dramatis personae* and from the premise that the wall's three

appearance, see Fig. 3 and, in facsimile, Fig. 4 (where the various participants in the action have been numbered and the columns of text lettered for ease of reference). As we shall see, what may further be deduced concerning this decoration strengthens significantly the conclusions of 2015 summarised above.<sup>4</sup>

### PHYSICAL AND PROPORTIONAL DIFFERENCES

The first to recognize that the north wall decoration of Tutankhamun's Burial Chamber (room J) differs "fundamentally"<sup>5</sup> from that same room's painted south, east and west<sup>6</sup> was the Getty Conservation Institute (GCI), reporting in 2012. Results of the Getty's analysis of the plaster and paint layers of J's four walls are presented in Fig. 5.<sup>7</sup>

The Getty investigation revealed several "technically distinct"<sup>8</sup> features of great interest, most significantly (1) the presence on the north of a unique, "overall gray preparatory layer",<sup>9</sup> and (2) a "discontinuous yellow background"<sup>10</sup> which had been painted around the figures of a pre-existing and essentially similar decoration laid out on white.<sup>11</sup> Observed also on the north were: (3) "specific color differences" – namely, "a brighter yellow and a paler green"<sup>12</sup> than those found on the south, east and west;<sup>13</sup> and (4) (though the distinction proves

ultimately to be of lesser relevance)<sup>14</sup> an "absence of [the] snapped [paint] lines" found elsewhere within J,<sup>15</sup> "and the use [instead] of, plaster incisions to establish ... figure proportions."<sup>16</sup>

What identifies the Getty findings as significant is their correlation with a curious finding made by Gay Robins in 1984:<sup>17</sup> specifically, that clear differences may be observed also in the proportional layout of this north wall decoration. Whereas its companion paintings on the Burial Chamber's south, east and west had been prepared according to an 18-square, post-Amarna proportional scheme, Robins noted that the figures populating the north had been laid out to a significantly different and earlier, Amarna-style grid of 20 squares.<sup>18</sup> See Fig. 6.

### TWO PHASES OF DECORATION

The GCI's summary view of these disparities was that they "probably demonstrate not only workshop divergence, but also the presence of two very different teams of craftsmen ... , one rooted in the Amarna tradition, the other not."<sup>19</sup> My own, 2015 study reached a significantly different conclusion: not that chamber J had been decorated by separate groups of craftsmen working concurrently, but that the 20-square and 18-square wall-paintings had in reality been prepared at *completely different times*.<sup>20</sup> Fig. 7.

I have argued, in fact, for two distinct stages in the decoration of room J. In the first of these – Phase I (corresponding to layers [h] through to [c] in the Getty sequence reproduced in Fig. 5) – this decoration consisted of a single scene on the Burial Chamber's north wall, laid out in Amarna proportions on a white background, with those accompanying walls on the south, east and west plastered but left plain.<sup>21</sup>

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scenes document key moments in Nefertiti's life (a crucial assumption with which I am unable to concur), see Haas-Dantes 2018; Huber 2016; Huber 2018; Huber 2018-2019.

<sup>4</sup> While the archaeology of KV 62 remains remarkably consistent in its message, the same cannot be said for interpretations of the geophysical data collected within and around the tomb since 2015. For a review of this evidence, by George Ballard, see below.

<sup>5</sup> Wong et al. 2012, S329.

<sup>6</sup> Ibid., S326, Fig. 5 = Reeves 2015a, Fig. 23.

<sup>7</sup> Getty Conservation Institute 2012-2013, 4, Table 1; Wong et al. 2012, S329. See Reeves 2015a, 8-9.

<sup>8</sup> Wong et al. 2012, S329. For further detail on the Getty's findings, see Getty Conservation Institute 2009; Getty Conservation Institute 2012-2013. (A further Getty Conservation Institute report, for October 2010, I have as yet been unable to consult.)

<sup>9</sup> Wong et al. 2012, S329.

<sup>10</sup> Ibid.

<sup>11</sup> See further *ibid.*, S327.

<sup>12</sup> Wong et al. 2012, S327.

<sup>13</sup> Ibid., S329. In the case of black pigment, it is interesting to note significant differences in preservation also, with that employed on the north seeming to fare better than that applied to the south, east and west: see Getty Conservation Institute 2009, 80.

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<sup>14</sup> Because of the evident *ad hoc* (and Phase II) nature of these incisions: see below, nn. 16 and 51.

<sup>15</sup> On the west wall: Getty Conservation Institute 2009, 23.

<sup>16</sup> Ibid., S329. The reference to north wall "incisions" appears to be restricted to the instance illustrated in Wong et al. 2012, S327, Fig. 7, B, and Getty Conservation Institute 2009, 24. See further below, n. 51.

<sup>17</sup> Robins 1984; Robins 1994, 155-158.

<sup>18</sup> Cf. Reeves 2015a, 9.

<sup>19</sup> Wong et al. 2012, S329.

<sup>20</sup> Reeves 2015a, 9. The earlier, pre-Getty view was that east, north and west walls had perhaps been decorated first, and the south wall last: Robins 2007. In Getty Conservation Institute 2012-2013, 3, it is conceded that their evidence "could also suggest hasty practice and the rushed preparation of an existing tomb (the walls of which were perhaps already partly plastered) for a king who died unexpectedly" – which perhaps moves a little closer to my position.

<sup>21</sup> The plastered, Phase I state of the south, east and west walls is apparent from the Getty's observation that a "thin



Subsequently, during Phase II (corresponding to Fig. 5, layers [b]-[a]), (1) three further sets of paintings were added to these undecorated surfaces – paintings executed from the start on a quite different, yellow ground,<sup>22</sup> and linked definitively to Tutankhamun by the combination of their inscriptions and an 18-square canon of proportions. At the same time, (2) the white background of the north wall’s already present, Phase I decoration was updated to match these new companion scenes, by the simple expedient of painting around, in yellow, the core elements of that wall’s existing subject-matter – in the process obscuring most of the hieroglyphic labelling which had identified this decoration’s original participants.<sup>23</sup>

Taken together, what these Phase II modifications signal, and very plainly, is that room J had been subjected not merely to an updating of its decorative scheme, but to a *change of use*. What we see today is evidence not of a single, collaborating team of older (Amarna-trained) and younger (post-Amarna) draftsmen and artists, but of a subsequent decision to upgrade and repurpose a significantly earlier, pre-existing space of hitherto secondary status – room J. This secondary space, which could originally boast but a single figurally painted wall on its north, was now, in Phase II, transformed into a “House of Gold” (*pr-nbw*) – that is, a Burial Chamber – with four fully decorated walls; and, as the inscriptions show, this transformation was undertaken for the specific benefit of Tutankhamun.<sup>24</sup> Date-wise, we are faced with two possibilities for this change of use: either (1) Phases I and II of the north wall decoration are to be assigned to separate moments within a single reign – which would obviously be that of Tutankhamun himself; or (2) both the underlying, Phase I decoration, and room J’s earlier role, relate to a *pre-Tutankhamun* occupant of KV 62. As we shall see, the evidence points compellingly to the latter.

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... gray wash uniquely covers the north wall ... [and] overlaps onto the buff wash on the east and west walls”: Wong et al. 2012, S326. This does not constitute evidence that the north wall as a whole had been the last to be decorated – merely that single, specific preparatory phase [e/d<sub>1</sub>]. See also the previous note.

<sup>22</sup> Wong et al. 2012, S328, note that “On the west wall, some hieroglyphs were initially painted in the wrong place, and were then brushed over with yellow paint and redone.” With Wong et al. I take these not as intentional adaptations but contemporary corrections analogous to those seen elsewhere (e.g. with the forward foot of figure [4]) and discussed below, on page 7 and in n. 58.

<sup>23</sup> Reeves 2015a, 10.

<sup>24</sup> Reeves 2015a, Fig. 24.

## NORTH WALL: SCENE 1

Figs. 8-9 present the opening scene of the north wall’s three-act narrative – a narrative arranged to be read from right to left (east to west). Within this initial scene stands a king – the figure on the right, here labelled [1] – conducting, as *sem*-priest, the Opening of the Mouth ceremony for a mummiform figure [2] shown standing on the left.

What is important to note about this scene is the priestly officiant. Within such a funerary context, the role of *sem* was one which pharaoh would have carried out *for his predecessor alone*, symbolizing as it does the fulfilment by a kingly successor (notional son = Horus) of vital obligations to the ruler who has just died (notional father = Osiris). As a depiction unique to KV 62,<sup>25</sup> this scene’s inclusion will have had a deliberate and quite specific aim – to emphasise, at a time of serious political instability, first (to the gods) the legitimacy of the succession depicted, and secondly (to those mortals witness to it) this succession’s divine acceptance.<sup>26</sup>

The interest of Scene 1 does not end there. What is particularly to be observed is the physical appearance of each of its two participants. As I first pointed out in 2015,<sup>27</sup> the face of the figure shown performing this rite, [1], is strikingly at odds with the scene’s current, Phase II labelling, which identifies this individual as “the god’s father Ay” – Tutankhamun’s much older successor. Rather than the features we might reasonably expect to find in a depiction of Ay – those of the fully mature man seen depicted in Southern Tomb no. 25 at El-Amarna – what in fact we encounter on the north wall of KV 62 is the plump, double-chinned face of a pre-pubescent, Amarna child.<sup>28</sup> But, more than this: in character this face is virtually *identical* to that found in three-dimensional representations of Tutankhamun at this same junior age (Fig. 10).<sup>29</sup>

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<sup>25</sup> In other New Kingdom royal tombs (for details see Hornung 1990, 209-210) the rite is carried out by a non-royal *sem*-priest on a life-sized funerary statue identical to one of the pair buried with Tutankhamun (Carter object nos. 22 and 29 – this latter figure actually identified in its frontal text as an image of the royal *ka*: see Beinlich and Saleh 1989, 11).

<sup>26</sup> Assmann 2005, 31-329, cited by Weeks 2009, 24; Revez 2010.

<sup>27</sup> Reeves 2015a, 10.

<sup>28</sup> Cf. Davies 1921, pl. I.

<sup>29</sup> Reeves 2015a, 10, Fig. 28 and see here Fig. 10. As for the specific claim that Ay too could be depicted with a similar chin (Hardwick 2015), obviously this was a feature shared by many individuals, though not necessarily in the specific, child-like combination we find here.

Equally contradictory is the mummiform object of the *sem*-priest's ritual attention [2]. Although labelled "Tutankhamun" in its present, Phase II, yellow-ground incarnation, the details of this mummiform representation are as far in appearance from those found in other extant images of the young king as can possibly be imagined. The figure's slender face and flattened under-chin, pronounced crease at the corner of the mouth ("oromental fold"),<sup>30</sup> elongated body and short legs – all combine to identify the subject as a woman.<sup>31</sup> Nor are these the features of just any woman: the face<sup>32</sup> and form<sup>33</sup> chime perfectly with late-Amarna representations of Nefertiti<sup>34</sup> (Figs. 11-12) – the famed queen of Akhenaten who, employing the paired cartouches (prenomen, nomen) Ankhkheperure (+ Akhenaten-dependent epithet) Neferneferuaten (+ Akhenaten-dependent epithet), latterly served as this king's co-regent;<sup>35</sup> the same woman who, on her husband's death, appears to have succeeded as pharaoh in her own right, retaining this same prenomen, Ankhkheperure (though with its Akhenaten-dependent epithets now abandoned as irrelevant), and adopting a completely new throne-name – Smenkhkare-djeserkheperu.<sup>36</sup>

Happily we are not dependent on stylistic features alone to be persuaded of these Phase I identifications. These strong, visual hints to the original identities of figures [1] and [2] which I first outlined in 2015 find confirmation now in the traces of a Phase I identifying text beneath the Phase II hieroglyphs of Ay's cartouched nomen [column b]. Here, within this cartouche's upper half (where the Phase II over-paint had been applied only thinly), may clearly be

discerned a reed-leaf, *i* (Gardiner M17): one sign alone, but surely not by chance the very hieroglyph which occupies this same position in the "honorifically transposed" -amun (-*imn*) component of Tutankhamun's cartouched nomen (Fig. 13).<sup>37</sup>

In its original, Phase I manifestation, therefore, the theme of the north wall's opening scene had demonstrably been a burial not *of*, but *by* Tutankhamun [1], with the object of that young king's attention his direct predecessor [2] – a woman, and one shown with features which correspond closely to late-Amarna representations of Nefertiti herself. Furthermore, as focus of the Opening of the Mouth ritual (with its clear message of successor legitimation), this mummified representation must have been of Nefertiti as *Akhenaten's successor* – i.e. in her mooted, final role as the pharaoh Ankhkheperure Smenkhkare-djeserkheperu.<sup>38</sup>

<sup>37</sup> Credit for this observation goes to Tom Hardwick (email, October 6, 2015), though he chooses to interpret the traces differently. In his view – and as he publicly posted on Facebook on July 16, 2017 in reaction to comments in a review by Clementi 2017 of Quilici and Hawass 2017, 183-184 (to whom, in an interview, I had credited Hardwick's sharp eye) – "... the only likely interpretation for the pentimento is that the name of Ay was initially mis-written ... and hurriedly corrected while the paint was wet. It argues, in fact, against the wall being re-painted any more than this and against the tomb being re-used from an earlier king". Quite apart from the visible sign having clearly been painted over when dry, within the context of the multiple and internally consistent modifications here discerned Hardwick's opinion is less than compelling – though Phase II drafting and correction are certainly found elsewhere in the tomb (west wall – Getty Conservation Institute 2009, 32; north wall – *ibid.* and see further n. 58 below concerning the palimpsest above figures [4] and [5]). Note that a "blur" within this same Ay nomen cartouche, adjacent to this underlying *i*, might conceivably be recognized as the remains of an over-painted *mn* (Gardiner Y5), though the application of a range of image-enhancement techniques (including DStretch: <http://www.dstretch.com>) has so far failed to confirm its existence. For those who would counter that the name-form employed at the start of the king's reign ought in any case to be "Tutankhaten," see now Reeves in press a and Reeves in press b, where it is shown that both "-aten" and "-amun" versions of the name were in fact in use concurrently.

<sup>38</sup> This unusual scene may have been included in the Phase I decoration of the north wall in an attempt to regularize the actual circumstances of Tutankhamun's succession. If Nefertiti was indeed the *dahamunzu* (*ḥmt nsw*, "the [particular] king's wife") who wrote to the king of the Hittites for a son to sit on the Egyptian throne by her side (J.R. Harris in Reeves 2001, 176-177; Miller 2007; Theis 2011), then having failed in this endeavor – which would doubtless have been viewed by her contemporaries as the ultimate treason and one she presumably did not survive. The possibility of *post-mortem* retribution, however, is surely to be discounted, given that the legitimation of the successor

<sup>30</sup> Reeves 2015a, 10.

<sup>31</sup> See in particular the more feminine form of this mummified figure [2] in comparison with the higher buttocks and more masculine line and stance of the (male god) Osiris [7] – despite the fact that both images display the facial characteristics of Nefertiti herself, in keeping with the tradition of a god's facial characteristics mimicking those of the ruling pharaoh (below, n. 42). Note that, had he so chosen, the ancient artist might have depicted Osiris as sharing Nefertiti's physical form, like the creator of the second shrine (Fig. 12, right). (Pace Reeves 2015a, 2, n. 11, I am now of the view that all four of the large gilded shrines had originally been intended for the co-regent Neferneferuaten.)

<sup>32</sup> *Ibid.*, Fig. 27 = here Fig. 11 (Berlin 21263).

<sup>33</sup> E.g. Hawass and Vannini 2007, 84 (Carter object no. 237: second outermost shrine).

<sup>34</sup> Several reused objects prepared initially for Neferneferuaten – that is, for Nefertiti as the co-regent of Akhenaten – and found within the Tutankhamun burial assemblage present precisely similar characteristics (for example, Carter object nos. 289b and 458).

<sup>35</sup> Reeves 2015a, 4.

<sup>36</sup> *Ibid.*

The later, Phase II updating of this original scene had been accomplished in the simplest manner possible: by adding around the figures a new, yellow background, and by over-painting both sets of cartouche-contents and inserting different supporting texts to reflect the scene's new, Phase II reality – a reality which has been taken at face value now for almost a century: that of the god's father Ay [1] officiating at the burial of Tutankhamun [2].

Not only does the underlying, Phase I decoration of the north wall relate to this painting's original employment by a pre-Tutankhamun occupant of KV 62, therefore; since (1) in its initial phase the scene may be determined as referencing the burial of Nefertiti/Smenkhkare, and (2) in its modified, Phase II version as depicting the burial of Tutankhamun by Ay, very clearly these two distinct stages were separated in time by some 9+ years – the minimum length of Tutankhamun's reign.<sup>39</sup>

### CLASSIFYING THE FACES

As the above analysis of Scene 1 demonstrates, the faces in the decoration of room J's north wall are key to disentangling the changes imposed upon this wall at the time of its Phase II remodeling – considerably more so, in fact, than I understood when first writing on this topic in 2015.

Fig. 14 illustrates the full range of facial types encountered in the north wall's three separate scenes, with distracting colours removed and the entire series orientated to the right for easier comparison. Using the base criterion of chin-shape already employed in the analysis of Scene 1, these faces are seen to fall into three distinct groups:

(1) images of Tutankhamun himself, comprising: first, the distinctly mannered, pre-pubescent face with “naturalizing eye”<sup>40</sup> seen in figure [1] – which, as we have discussed, may be confidently assigned to this king by surviving traces within one of its original, Phase I cartouches (cartouches later, during Phase II, reassigned to Ay); and, secondly, figures [3] and [6], which display the same, Tutankhamun-style features as [1] but in a more mature form appropriate to the

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was dependent on a deceased king's pharaonic (and physical) status continuing to be honoured with a proper funeral. See above.

<sup>39</sup> Estimated on the basis of wine-jar docket of Year 9: Černý 1965, 3, nos. 18-23. Černý's proposed assignment to Tutankhamun of the KV 62 docket of an unspecified Year 10 (*ibid.*, no. 24) is now considered unlikely: Tallet 1996, cited by Eaton-Krauss 2016, 103).

<sup>40</sup> On the “naturalizing eye” and “formal eye” see Hardwick 2003, 121.

Phase II adaptation of the scenes in which they occur (Scenes 2 and 3) a decade later;

(2) three faces with “formal eye” which display a distinctly flattened under-chin, oromental fold and double neck-wrinkles: [2], [5] and [7].<sup>41</sup> With [2] established as an image of Tutankhamun's predecessor, Nefertiti/Smenkhkare (see above), clearly a similar identification will have been intended for [5] and [7] also; and, since this lady played no role in the burial of Tutankhamun by Ay (she was already dead), these images too must form part of the north wall's original, Phase I decoration;

(3) a single, wholly distinctive face – that of the goddess Nut [4] in Scene 2, shown with a “naturalizing eye.” In the same manner that the face of a male divinity traditionally mimics that of the (recently) reigning pharaoh,<sup>42</sup> since the features here are associated with a goddess they are correspondingly likely to be those of pharaoh's principal queen.<sup>43</sup> If figure [4] is to be recognized as an original, Phase I creation carried over for use in Phase II (and there are no indications to the contrary), then the likelihood must be that the facial features of Nut are here intended to reflect those of Meritaten – Nefertiti/Smenkhkare's ritually functioning “great royal wife” (*hmt nsw wrt*).<sup>44</sup>

To sum up: what these facial distinctions establish, and very clearly, is that when the north wall's Phase I decoration was remodeled for its new, Phase II owner, Tutankhamun, the Phase I imagery was for the most part allowed to stand unchanged. The corollary is that where an adult-style Tutankhamun face occurs in the decoration of this wall, it is surely indicative of Phase II reworking.

### NORTH WALL: SCENE 2

With the north wall's faces duly categorised, the conclusions reached above – namely, that Phases I and II relate to completely different times and to two quite separate individuals – may be further tested.

We begin with Scene 2 (Figs. 15-16). In its current, Phase II manifestation, the image on the right [3] is not

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<sup>41</sup> Although these wrinkles are employed in a consistent manner within the Phase I north wall, on the Phase II south they are not; the feature similarly varies in its employment among the tomb's actual contents – despite these now being recognized (on a variety of grounds) as having been prepared predominantly for the same person – the co-regent Neferneferuaten.

<sup>42</sup> Schäfer 1974, 62.

<sup>43</sup> As in the faces of the Amun and Amunet statues from the reign of Tutankhamun at Karnak, which similarly differ from each other: see Eaton-Krauss 2016, 54-55.

<sup>44</sup> Reeves 2015a, 10, n. 73, with the parallels there given.

only labelled as Tutankhamun: it carries the facial features of this king in what I have identified as their later, more adult form. If figure [3] had been an image simply carried forward from Phase I, painted around in yellow and relabelled during the Phase II remodelling, then, as this scene's principal actor, we should expect something quite different: the face ought in that case to carry the features of the decoration's original owner, Nefertiti, as encountered in images [2], [5] and [7]. Since it does not, then the conclusion must be that the figure [3] we see today is either (1) a Phase II replacement in its entirety, or else (2) a Phase I image which had been subjected to a significant degree of Phase II reworking. That it is the latter may in fact be demonstrated.

Figure [3] is distinguished not only by its more mature Tutankhamun-style face; it is also noticeably taller, and with an inappropriately large head and torso. Close scrutiny reveals the reason for this odd appearance: it is due to the curious employment within a single figure of *two different sets of proportions*. For the figure's lower half, an Amarna-style grid of 20 squares is in evidence, in keeping with the rest of the north wall decoration; for the upper torso and head, however, a post-Amarna, 18-square grid has very clearly been employed (Fig. 17). What this odd fusion tells us is that figure [3] had indeed been remodelled during Phase II, as the facial features suggest, but only partially – that is, by painting out and replacing in their entirety an original, Phase I upper body and head.

How to rationalize such half measures? The sacrifice of figure [3]'s original upper torso and head (and headdress) had plainly been essential to establishing the new, male ownership of Scene 2 during Phase II – the implication being that what was removed had been inappropriately female in appearance. But if so why – as we are able to recognize from its surviving 20-square proportions – had figure [3]'s lower half, which was presumably equally feminine, been allowed to stand?

The curious, flapping ends of figure [3]'s sash offer a clue. The costume this figure is shown wearing in the Phase II version of Scene 2 is a masculine, tucked-up kilt<sup>45</sup> – a garment whose basic outline in fact follows that of a more formal, full-length costume common to both sexes but particularly favoured by women.<sup>46</sup> One female frequently encountered wearing this full-length dress-type is Queen Tiye (Fig. 18), Akhenaten's

mother, but it is equally found modelled by a range of Amarna ladies – including Nefertiti herself.<sup>47</sup>

What the sash-ends common to both kilt and full-length dress suggest is that figure [3] had been permitted to retain its Phase I, 20-square lower half for a purely practical reason – that what was originally worn by this figure could be readily adapted for Phase II's bare-chested male reuse by simply painting-out sections of an existing, full-length female drapery. It is an idea encouraged by two specific features: (1) a visible area of yellow repaint above figure [3]'s advanced right leg, which follows the outline of such a longer garment – employing, moreover, the same, somewhat darker shade of colour used to re-silhouette this same figure [3]'s replaced, Phase II face and head; and (2) the suggestion of an under-yellow, Phase I hem-line crossing this figure's rear ankle. See Fig. 19.

### NORTH WALL: SCENE 3

In its current, Phase II version, the north wall's third scene (Frontispiece and Fig. 20) depicts three figures: Tutankhamun [6] and his *ka* [5] standing together on the right, welcomed into the underworld by the god Osiris [7] on the left. The central, kingly figure is the second of the north wall personalities to display the more mature, Phase II Tutankhamun face; the flanking figures of the king's *ka* [5] and Osiris [7], by contrast, each carry the Phase I features now recognized as those of Nefertiti.

While the most jarring feature of Scene 2 had been figure [3]'s top-heavy proportions, what is immediately striking about Scene 3 is this composition's cramped nature, conveying as it does the strong impression that figure [6] had been squeezed in as an afterthought. That this is the reality is indicated both by specific details within the imagery itself and by the equally cramped layout of the associated inscriptions (on which see further below).

The first point to note is a Phase II remodeling of the Osiris figure [7]'s mid to lower outline, of which indisputable traces may be discerned in a composite Factum Arte photo + surface scan<sup>48</sup> and in obliquely lit detail photographs kindly supplied by the Getty

<sup>45</sup> Cf. Davies 1903-1908, I, pl. XXII (Meryre); V, pl. III (May); VI, pl. XVI (Tutu) (worn by Akhenaten); Eaton-Krauss and Graefe 1985 (Tutankhamun).

<sup>46</sup> For its physical form, cf. Vogelsang-Eastwood 1994, 74-75.

<sup>47</sup> Clear examples: Davies 1903-1908, IV, pls. V (Pentu), XV (Mahu), XXXV (Ramose); V, pl. XXXIII (Boundary Stela N); VI, pls. XVI (Tutu), XXVI (Ay). The costume is encountered during the immediate post-Amarna period also, worn most memorably by Ankhesenamun on the small golden shrine of Tutankhamun (Carter object no. 108): see Eaton-Krauss and Graefe 1985.

<sup>48</sup> Kindly prepared by Peter Gremse, Concept-Zone, Cologne.

Conservation Institute.<sup>49</sup> See Fig. 21. By moving this figure backwards, the Phase II artist had clearly been seeking to free-up additional central space – limited, in the end, though the results of that exercise proved to be.

Further indications that figure [6] represents a Phase II insertion may be found elsewhere in this scene: (1) the figure’s mature-style Tutankhamun face which, as in Scene 2, has no relevance to Phase I; and (2) clear traces of Phase II yellow beneath this central figure’s rear foot – in contrast to the Phase I white which may be seen to underlie the painted feet of figure [5]<sup>50</sup> (Fig. 22).

The final confirmation, however, is provided when we metaphorically step back. If, for purposes of comparison, we *remove* this central figure [6] in its entirety, and return the Osiris image [7] to its original, Phase I outline, it will be seen that the integral balance of Scene 3 and its relationship to the north-wall decoration as a whole are restored to compositional normality. Cf. Fig. 23. The exercise serves not only to confirm that figure [6] had indeed been added as part of the Phase II remodeling of room J to create a Burial Chamber for Tutankhamun; more significantly, it reveals that the principal participant in the original, Phase I version of this scene had been the figure now labeled as Tutankhamun’s *ka* [5].<sup>51</sup>

Quite apart from the facial features of figure [5] – which, as already noted, follow the Nefertiti model – it will be observed that this figure wears not the more regal bag wig with lappets seen in Ay’s *ka*-images

within WV 23,<sup>52</sup> but a simple tripartite wig. Though this latter has both divine and unisex aspects, what is noteworthy in the present context is the wig-type’s regular employment by high-ranking women in a specifically funerary context; as examples we may cite Tiye on her KV 55 shrine,<sup>53</sup> Teye within WV 23,<sup>54</sup> and Nefertari in the Nineteenth Dynasty decoration of her tomb, QV 66<sup>55</sup> (Fig. 24). This same wig is found worn by Nefertiti also, in life, as queen, during the more conventional, early part of Akhenaten’s reign.<sup>56</sup>

What is more, the *ka* emblem which surmounts figure [5]’s wig and defines this figure’s current role is very clearly a Phase II addition: not only is the inscriptional element “Strong Bull” (*k3 nht*) inappropriate for a woman,<sup>57</sup> but significant earlier detail may be discerned in this area beneath the present yellow paint (Fig. 25).<sup>58</sup>

Everything points, in other words, to figure [5] having begun its life not only as the principal participant in Scene 3, but again as a woman – distinguished from the suppressed, Phase I female figure [3] of Scene 2 by the fact that here the Phase II “masculinisation” had been imposed from the neck down to the floor rather than from the waist up.<sup>59</sup>

Moreover, the precise date of this alteration, from Phase I female ruler to Phase II male *ka*, may be established with fair certainty – from the detail of figure [5]’s yellow kilt. Although this area of the north

<sup>49</sup> GCI image TUT\_BC\_Nw\_MI\_008\_05\_rak.jpg, kindly shared by Neville Agnew and Lori Wong. Compare also Getty TUT\_BC\_Nw\_MI\_008\_06\_ExLED\_Emrg830\_a.jpg, TUT\_BC\_Nw\_MI\_008\_06\_ExLED\_Emrg830\_b.jpg and TUT\_BC\_Nw\_MI\_008\_06\_ExLED\_Emrg830\_c.ed.jpg.

<sup>50</sup> This evidence would appear to discount the possibility of any chronological significance being assigned to the fact that the yellow of the belt-sash of figure [6] is of the same shade as the pale yellow of the Phase I figure [1] – for which see Getty Conservation Institute 2009, 26; Getty Conservation Institute 2012-2013, 73.

<sup>51</sup> It is worth noting the odd proportions of figure [6] (which Robins drops from her later, 1994 grids presentation, as well as taking the opportunity to correct her 1984 analysis of figure [2] on the south wall). As Robins observes, “the king and his *ka* ... each have slightly different hairline heights, which is unusual in a row of figures” (Robins 1994, 157); in fact the brow-line and chin-line correspond with those of the Phase II figure [3], considered above, with the lower half, again, closer to the proportions of the regular, 20-square figures on this north wall. The height of the figure [6] insertion (seemingly alone) was clearly established in front of the wall itself, during Phase II, by making “horizontal incisions across the shoulders of” it and figure [5] (Wong et al. 2012, S327-S328, Fig. 7, B, and cf. Getty Conservation Institute 2009, 24).

<sup>52</sup> Johnson 2015, 212, 216-218.

<sup>53</sup> Davis 1910, pl. XXXIII.

<sup>54</sup> Lepsius 1972-1973, V-VI, pl. 113, c.

<sup>55</sup> E.g. Dondelinger 1973, 99.

<sup>56</sup> At Karnak (e.g. Smith and Redford 1976, pls. 8, 1, 3-4; 10; 32, 6); on Amarna Boundary Stela S (Davies 1903-1908, V, pls. XXVI, XXXIX).

<sup>57</sup> As we see in the case of Hatshepsut: Bell 1985, 259. In fact no names other than prenomen and nomen are known for Neferneferuaten or Smenkhkare.

<sup>58</sup> The possible earlier presence of text-division lines might be suggested, as well as longer arms to the *ka* emblem. However, neither DStretch nor more conventional image-enhancement methods (UV, infrared; selective photography kindly made available through the GCI) have been able to offer any clarification. The subject-matter (*ka*-emblem) and its continuing visibility would seem likely to identify this detail as over-painted Phase II drafting applied directly to the Phase I white ground prior to the application of the final, yellow background.

<sup>59</sup> It is interesting to observe that the original Phase I, 20-square proportions were for this figure’s replacement torso and legs evidently retained (Robins 1994, 158, Fig. 6.46); perhaps the artist(s) charged with the Phase II modification of the north wall, working systematically from right to left, had learned from the bizarre outcome of his/their (mistaken) application of an 18-square canon to the upper part of figure [3] – which he/they may have sought to mitigate by aligning with it the brow and chin-line of figure [6] (see above, n. 50).

wall has been heavily restored in modern times (see the discussion below), an original Carter/Burton photo in the Griffith Institute in Oxford preserves a record of this scene in its original, pristine state.<sup>60</sup> This photo confirms that the figure [5] garment matches precisely that worn by Anubis on the south wall<sup>61</sup> – see Fig. 26. If, as seems likely, these two kilts had been painted by the same artist, then clearly this work had been executed at the time of room J's Phase II transformation into a burial chamber for Tutankhamun.

And what, in the north's figure [5], did this Phase II male torso and yellow kilt replace? Sadly, because of the Phase II yellow over-paint and extensive modern restoration at this point (see below) nothing meaningful of the original Phase I lower portions is discernible today from which to judge. Nevertheless, reference to extant parallels of the tripartite wig in use – e.g. by Tiye,<sup>62</sup> Teye,<sup>63</sup> Nefertiti herself<sup>64</sup> and Nefertari<sup>65</sup> – suggests that, as in Scene 2, the garment worn will again have been a long, white, formal linen robe, either in the fuller form discerned in Scene 2,<sup>66</sup> or in a narrower, more closely fitting version.<sup>67</sup>

### MODERN RESTORATION

Although the presence of modern restoration within the Burial Chamber decoration was of course observed by the GCI during their work of conservation at the tomb,<sup>68</sup> the extent of this repainting is most immediately conveyed in a visual conspectus prepared by Factum Arte and showing the state of all four walls before the Getty conservation began.<sup>69</sup> That specific part of the Factum Arte record which documents the pre-Getty condition of the north wall is reproduced here as Fig. 27;<sup>70</sup> within that record, the areas of

immediate interest are those restored portions shown in pink, with other, incidental damage highlighted in blue, cracks in green and injection holes (for consolidants) in red.

Curiously, none of Carter's excavation notes anywhere reference this work of restoration, or intimate when or why it had been carried out.

The largest area of repaint on the north can be seen to measure a massive metre across – significantly larger than any other repair found on the north or the Burial Chamber's companion walls to the south, east and west. That this large area of make-up is wholly modern is indicated by two features: (1) brown paint added in a somewhat random fashion – by means of splashing or dabbing with a brush – to simulate the natural mould-growth seen elsewhere on this and the tomb's other painted walls<sup>71</sup> (Fig. 28); and (2) the fact that the brush employed to delineate the knee-caps of figure [5] had been a wholly non-pharaonic "fitch – a brush with long soft hairs" which produces lines with "tapering ends ... not found elsewhere in the tomb"<sup>72</sup> (see Fig. 29). These deficiencies apart, the overall competence of the restoration is high, and the results are at first glance exceptionally convincing.

Fortunately, a study of the surviving photographic record permits the date of this larger area of restoration – and, with it, much of the other repaint also – to be narrowed down with some precision. The GCI was again the first to look systematically into the matter, and its preliminary findings are developed further here.

No complete images of the Burial Chamber walls were included in any of the three published volumes of Carter's *Tomb of Tut.ankh.Amen*, presumably because no clear shots of the chamber were possible until some time before February 1932,<sup>73</sup> when the last sections of Tutankhamun's large, gilded shrines had finally left the site to travel downstream to Cairo. Photographs were taken soon after this removal, however, and these images are preserved today among the core Tutankhamun archive gifted to the Griffith Institute by Carter's niece, Phylis Walker – a vouchsafe for their

<sup>60</sup> Griffith Institute, Carter MSS, Carter/Burton photo p0879c.

<sup>61</sup> As discussed by Fabienne Haas-Dantes: Haas-Dantes 2018, 33.

<sup>62</sup> Davis 1910, pl. XXXIII.

<sup>63</sup> Lepsius 1972-1973, VI, pl. 113.

<sup>64</sup> E.g. Davies 1903-1908, V, pls. XXVI, XXXIX (Boundary Stela S); VI, pl. II (Pennefer).

<sup>65</sup> Dondelinger 1973, 77, 85, 91, 103, 110, 118, 117.

<sup>66</sup> Cf. Smith and Redford 1976, pls. 17, 19 and passim; Davies 1903-1908, VI, pl. II (Pennefer).

<sup>67</sup> Smith and Redford 1976, pls. 8, 10 and passim.

<sup>68</sup> Getty Conservation Institute 2009, 41-48.

<sup>69</sup> Factum Arte 2012, 17.

<sup>70</sup> A second mapping of visible restorations which supports the Factum Arte findings has been independently compiled by Scott Robinson on the basis of the Factum Arte online photographic record of the paintings at <http://www.highres.factum-arte.org/Tutankhamun/>. This

was kindly shared with me via email on September 22, 2015.

<sup>71</sup> This addition of simulated mould-growth was independently observed by both Scott Robinson and Dennis Payne, who each generously communicated to me their findings by email on September 22, 2015 and December 31, 2016.

<sup>72</sup> Factum Arte 2012, 17.

<sup>73</sup> Carter (and Mace) 1923-1933, III, vi; Griffith Institute, Carter MSS, I.9.iii (1). For reasons of wall-accessibility, Weeks' and the Getty's suggested date of 1925/1925-1926 seems highly improbable: Weeks 2009, 32; Getty Conservation Institute 2009, 41 and n. 1.

assignment to the period before the excavator's death in 1939.

The Griffith Institute image of the north wall is that now referenced as Carter/Burton photo p0879c, reproduced here as Fig. 30. As the earliest extant record of the entire north wall, it amply repays close inspection.

Indisputably, as the Getty independently concluded,<sup>74</sup> this photograph shows the decoration in its original, pre-restoration state. Not only do we observe obvious, age-related cracking within those portions of the wall which are now occupied by modern fill, but (a point the Getty apparently missed) a specific count of the diagonal black stripes of figure [5]'s kilt along its lower edge differs tellingly from that yielded by a count made on the wall today: in the Carter/Burton shot there are 24 stripes in evidence, whereas the kilt in its current, restored condition shows three lines extra – a total of 27 (Fig. 31). Other, lesser discrepancies may be observed also, in the *ankh* sign and its grasping fist, and in the precise outline and tapering, “fitched” endings of the lines which define the kneecaps. Noteworthy too is the impression of significantly less mould-growth in the area of figure [5] than exists today – an impression which is, in fact, illusory, since all of this later “growth” proves in fact to be faked with brown paint.<sup>75</sup>

As the Griffith Institute photograph testifies, at the time of the tomb's discovery in 1922 the north wall decoration had very clearly been intact, and for most of the clearance it would continue to display minimal evidence of physical loss or obvious frailty. By 1936,<sup>76</sup> however, it is intact no longer: a second series of images, taken during that summer by the Oriental Institute of the University of Chicago, presents the decoration much as we see it today: restored, with increased kilt-stripe count and painted mould-growth (Fig. 32).<sup>77</sup>

Both the skill attested by this extensive area of repainting – so good that it would evade detection for almost a century – and the time-period to which it clearly dates, c. 1932-1936, point directly to Carter, a

talented artist in his own right,<sup>78</sup> as the responsible party. What had he been up to?

The precise year was probably 1932, Carter's last formal season, when the Burial Chamber at last stood empty (save for the sarcophagus). The wall decoration had now been photographed, and the excavator was about to embark on the repair of various bumps and abrasions suffered by the painted walls during the dismantling and removal of the large gilded shrines and the unpacking of the sarcophagus. But he clearly also had one nagging doubt, which he wished finally to confirm while he still could: to test whether something further might lie beyond room J; whether the tomb might, in other words, continue deeper into the gebel. With his long familiarity with Egyptian tomb design and funerary practice, Carter undoubtedly entertained then the same doubts that I do now. Consequently, he determined to carry out a little surreptitious extra “digging” – within and beneath those damaged areas of the wall he was about to fill and repaint.

Sadly, during this process, it seems that curiosity got the better of him: as the Getty delicately observes (in specific reference to the north wall's figure [5] headdress), the “small areas of loss” seen in the Griffith Institute photograph p0879c were of insufficient “extent [to] warrant the amount of restoration that was actually undertaken.”<sup>79</sup>

Since Carter makes no mention of this exploratory work anywhere in his notes, and addresses in equal silence his restoration of the damage these investigations caused, we may reasonably assume that no evidence of any tomb-continuation was encountered. However, since the side of the wall he had chosen for his most extensive investigation is an area clearly identified as bedrock by the presence of a rock-cut niche and diagonal quartz vein, neither should anything very much have been expected at this point.

It is easy, nonetheless, to understand Carter's preference for investigating the left-hand (western) portion of the north wall: within Eighteenth Dynasty royal tombs, access beyond the “well” (E) – which is how the excavator himself perceived room J's original role within KV 62<sup>80</sup> – is consistently located on the left-hand side of that room's facing wall.<sup>81</sup> So why not here? The answer appears to lie in KV 62's original,

<sup>74</sup> Getty Conservation Institute 2009, 41-48.

<sup>75</sup> “Rigorous comparison of the spots with historic photographs has shown no new growth” (Wong et al. 2012, S324; so also Weeks 2009, 32).

<sup>76</sup> In the matter of the date, I here follow Steindorff 1938, 642, who mentions that he had commissioned the shots for his article. The Getty suggest 1935: Getty Conservation Institute 2009, 41.

<sup>77</sup> See Steindorff 1938, pl. CXVI; the original Oriental Institute image, 6409, is that reproduced here as Fig. 32. I am particularly grateful to Ray Johnson and Sue Lezon for facilitating early access to a high definition scan of this photograph.

<sup>78</sup> Cf. James 1997.

<sup>79</sup> Getty Conservation Institute 2009, 105, bottom left.

<sup>80</sup> Carter (and Mace) 1923-1933, III, v. See further below.

<sup>81</sup> Which of course, from the point of view of the deceased (see below, The Burial of Nefertiti? Revised Addenda and Corrigenda to Reeves 2015a, note to pages 7-8), is the right = superior = male: KV 34 (Thutmose III), KV 35 (Amenhotep II), KV 43 (Thutmose IV), WV 22 (Amenhotep III), KV 57 (Horemheb), KV 17 (Seti I), KV7 (Ramesses II).

queenly form (Fig. 33):<sup>82</sup> with the axial turn of such a tomb being to the right, any continuation beyond the well should correspondingly be anticipated on the facing wall's *right-hand side*.<sup>83</sup>

But in that case, why did Carter find nothing on the north wall's eastern side either, where he was similarly engaged in making-good accidental damage? I can only surmise that the restricted areas of access in this location were either: (1) too restricted to draw any meaningful conclusions; or (2) repaired without further investigation by the excavator, disappointed by his failure to find a continuation where he had expected it (and very possibly chastened at having caused so much damage in the process).

For whatever reason, no further damage was inflicted on this once-intact north wall scene; Carter's speculative mutilation of its western side is reprehensible, and the concealment of his actions serves only to compound the seriousness of his lapse. But the excavator's professionalism did at least extend to ensuring that the wall was photographed before this physical investigation began – a form of documentation he resorted to whenever a plan of action within the tomb seemed likely to prove irrevocable.<sup>84</sup> For this we should be grateful, for from this one photograph it is possible to reconstruct not only what Carter had done, but something of his thought processes and suspicions as well.

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<sup>82</sup> Reeves 2015a, 7-8.

<sup>83</sup> See further below on the original role of room J within KV 62.

<sup>84</sup> Carter was equally scrupulous in his photography of the intact Burial Chamber blocking, which he and his team would discreetly penetrate on the evening/early hours of November 27/28, 1922. A single photograph of this blocking in its original, undisturbed state exists, presumably a Carter shot (Burton had not yet joined the team), the significance of which is not generally recognized: the image is that reproduced without comment in Carter (and Mace) 1923-1933, I, pl. XLII (? = Griffith Institute, Carter MSS, Carter/Burton photo p0282). It shows the wall as it had survived from antiquity, with the slightly darker colour of the anciently, fully reclosed, plastered- and stamped-over robbers' hole clearly visible. Note the position of the "Painted Box" at bottom right, with its knob clearly visible adjacent to the wall – in contrast to Carter (and Mace) 1923-1933, I, pl. XVI (=Griffith Institute, Carter MSS, Carter/Burton photo p0007). In the second shot, obviously taken later, the box has been swung around by 180 degrees; moreover, the ancient and stamped reclosing of the robbers' hole is gone, removed to allow the excavators to secretly enter and explore both the Burial Chamber and beyond – this access afterwards concealed with the upturned basket lid and handful of reeds we see in the later image. See Reeves 1990, 63. *Inter alia*, this effectively denies the proposal made by Rolf Krauss that the evidence of the tomb's robbery had been deliberately falsified by Carter: Krauss 1986.

## TEXTS OF THE NORTH WALL

What had been the precise character of the north wall's Phase I hieroglyphic texts? Here again, a number of observations may be made.

A significant feature of these inscriptions today is that the tops and bases of Scene 1's two pairs of Phase II cartouches align fairly precisely, both with each other and with the top and base of the single cartouche in Scene 2 (Fig. 34). And since, as we have seen, the Phase II nomen of Ay in column [b] is palimpsest over the remains of a Phase I nomen of [Tutankh]a[mun], this would appear to establish not only this particular oval's original, Phase I position but by extension the primary placement of all five of these neatly aligned, Scene 1 and Scene 2 cartouches. When, a decade later, Phase II yellow over-paint came to be applied to update the north wall's Phase I background, it is clear that these specific cartouches, like most of the wall's figural content, were simply navigated around and their interiors whited-out in preparation for the insertion of new identifying texts.

When we come to examine the inscriptions in Scene 3, however, we find the single cartouche there woefully adrift (see Fig. 34). Its dramatic misalignment, as also the fact that this entire caption [columns q-s] is squeezed into a space scarcely adequate for it, serves only to confirm what was deduced above for the figure [6] which this hieroglyphic inscription serves to identify: that both image and text represent coordinated, Phase II insertions.

However, even without the inserted columns of inscription [q-s], the current Phase II labelling of the north wall remains noticeably cluttered and ill-arranged. Why should that be? The impression gained is that Tutankhamun's reuse of this wall significantly increased the wordage. While necessarily speculative, considerations of balance suggest that, in their Phase I incarnation, the wall's original texts took up perhaps no more than three [b-d] and two [e-f] columns in Scene 1, and two for each of the four figures in Scenes 2 and 3, at [i-j], [k-l], [o-p] and [t-u].

## CONCLUSIONS

What may reasonably be deduced concerning the north wall's original, Phase I appearance is presented in Fig. 35. Inevitably, much of the finer detail remains lost to us – for example, it is impossible, on present evidence, either to determine the headgear worn by the figure of Nefertiti [3] in Scene 2, or to establish the presence of any supplementary embellishment to the



headdress of figure [5] in Scene 3 (such as elaborate vulture overlay, or superposed emblem<sup>85</sup> – though for the latter there is precious little space). Beyond general identifications, precise textual content similarly remains obscure, while hand and arm positions/gestures and the possible presence of offering-stand(s) and other design elements is also uncertain. Nevertheless, much *is* apparent, and this evidence is sufficient, I think, to venture a number of broader conclusions.

We encounter in the Phase I version of room J's north wall three pairs of figures arranged over three separate scenes, with Nefertiti the consistent focus of attention in each. By the theme of this wall's opening scene – that of a king burying his equal – the female object of pharaoh's attention is plainly to be understood as an individual of comparable, pharaonic status.

This same mummified form grasps today what it had clearly grasped in its original, Phase I incarnation – not the usual kingly crook and flail but a single flail in either hand.<sup>86</sup> The absence of a *hk3*-sceptre (crook) in this scene is curious, and *may* imply that ultimately,<sup>87</sup> despite her inherited status as sole ruler following Akhenaten's death, Nefertiti's earthly power was in fact constrained;<sup>88</sup> perhaps her final representation wearing a queenly tripartite wig rather than a formal, kingly crown is to be similarly construed. Whether the omission of a Nefertiti/Smenkhkare *ka*-figure<sup>89</sup> in the Phase I

version of Scene 3 points in this same direction, however, is arguable: that particular absence might equally be explained by chamber J's secondary status during Phase I (on which see below), in which lesser context the presence of a *ka*-figure may simply have been inappropriate.

The most significant question raised by the north wall's Phase I decoration, however, is this: *why was it there at all?* Why, within a tomb purportedly prepared to accommodate the burial of Tutankhamun alone, do we encounter three scenes commemorating the obsequies of *someone else altogether?* In fact, only one explanation is possible, as I indicated in 2015: the north wall's Phase I decoration was present within KV 62 for the sole reason that its subject *must have been buried there*, in a suite of funerary chambers behind.<sup>90</sup> KV 62 was Nefertiti's tomb.

The character of the north wall's Phase I decoration, moreover, makes it very clear that the original role of KV 62's room J had been very different from its Phase II status as a Burial Chamber for Tutankhamun. In later royal tombs, scenes analogous to that depicting the Opening of the Mouth (albeit with no obvious legitimizing role, and carried out on royal statues rather than on the mummy itself and by priests alone) are never found within the burial chamber proper; they are in fact typical of corridors G-H, located significantly closer to the tomb entrance.<sup>91</sup> As for sequential images of the king welcomed into the underworld by a variety of gods: while such representations are not entirely absent from the decoration of Eighteenth Dynasty and later royal burial chambers (albeit primarily showing king and divinity paired on individual pillar-faces), they are very much a feature of the wall decoration in two specific chambers of secondary status: room E (the "well"),<sup>92</sup> and anteroom I (located immediately before the burial apartments proper).<sup>93</sup> With its axial off-set, KV 62's room J might correspond to either of these secondary spaces; with its sunken floor, however, and its proximity to the tomb entrance, the likelihood is that the room later taken over for Tutankhamun's burial had been designed, and during Phase I had served, as KV 62's notional "well," E – Carter's own view, as we have seen, and one I am inclined to share.<sup>94</sup>

What is significant about this conclusion is that in both of these locations – that is, on the facing walls of chambers E and I as one enters – painted scenes were

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<sup>85</sup> See, for example, Dondelinger 1973, and Fig. 24 here (right).

<sup>86</sup> Two *shawabti* figures from KV 62 are similarly depicted carrying two flails – Carter object nos. 325a (figure in gilded wood with copper emblems) and 459g (in calcite, with symbols carved *en masse*). On the record card of the former Carter notes "two flagella!!! in hands;" on that of the latter he records simply "holds in both hands the flagellum," and includes a drawing. The facial features of both images are generic, and the inscriptions, of Tutankhamun, are seemingly unaltered – as, equally though, are the several Tutankhamun *shawabti* which display Nefertiti's obvious facial characteristics (e.g. Carter object nos. 110, 458).

<sup>87</sup> Earlier images of the queen holding a sceptre are known – both in life (for example the quartz-sandstone torso British Museum EA 12278), and, in a funerary context, fairly consistently among the co-regent (Neferneferuaten) pieces taken over, seemingly with little iconographic change, for use by Tutankhamun (e.g. the canopic coffinettes, Carter object no. 266g).

<sup>88</sup> It may or may not be relevant that the sole post-interment reference we have to Nefertiti (on a Nineteenth Dynasty Deir el-Medina stela, of Pendua, in Turin) is as a goddess and not as a deified king: Tosi and Roccati 1972, 74-75 (N.50040 = cat. 1565); Gitton 1975, 48, no. 64; 68 (B, K).

<sup>89</sup> Cf. Bell 1985, 257-258. Was the *ka* which Hatshepsut had claimed for herself in life and of which she was dispossessed

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*post mortem* (cf. Roehrig 2005, 278, Fig. 97), likewise in death denied Nefertiti?

<sup>90</sup> Reeves 2015a, 11.

<sup>91</sup> Hornung 1990, 209-210.

<sup>92</sup> *Ibid.*

<sup>93</sup> *Ibid.*

<sup>94</sup> See above, 8 and n. 79.

applied not solely as decoration. Executed only *after* a burial had been made, the principal role of their imagery was in fact security: to act as a “blind” – that is, as a divinely protected closure which simultaneously identified the burial, sealed it off, and conveniently hid evidence of the tomb’s continuation beyond that point.<sup>95</sup>

Given both the queenly architectural beginnings of KV 62,<sup>96</sup> and what may now be further deduced concerning the north wall’s original, Phase I subject-matter, I remain convinced that here too, on the north wall of Tutankhamun’s Burial Chamber, we are faced with a painting originally executed to conceal access to a pre-Tutankhamun continuation of KV 62, and to that larger tomb’s earlier and original funerary apartments – those of the lady now revealed as the primary focus in all three of the north wall’s separate, Phase I scenes. The fact is, without the presence of a Nefertiti/Smenkhkare burial behind, there would have been no reason for a Phase I version of this north wall painting to exist.

Nicholas Reeves  
July 13, 2019

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<sup>95</sup> Reeves 2015a, 9-10, Fig. 26.

<sup>96</sup> *Ibid.*, 7-8.

## A REVIEW OF THE GEOPHYSICAL DATA

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[Editor's note. Since September 2015, multiple scientific tests have been carried out within and around KV 62 in a desire to investigate, non-destructively, the proposals put forward in my initial paper, *The Burial of Nefertiti? Techniques so far employed have included thermal imaging,*<sup>97</sup> *ground-penetrating radar (GPR),*<sup>98</sup> *and electrical resistivity*

*tomography (ERT).*<sup>99</sup> *My personal involvement with the geophysical process has been limited, though in most instances I have been accorded the courtesy of access to the resulting data to study and submit for specialist comment and clarification as required.*

*The latest series of radar tests to have been completed are those of an Italian team coordinated by Francesco Porcelli of the Polytechnic University of Turin in 2018 (GPR IIIa); this survey concluded, "with a high level of confidence, that Reeves' theory concerning the existence of hidden chambers adjacent to Tutankhamun's tomb is not supported by the GPR*

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<sup>97</sup> *Thermal imaging I, 2015:* Clemente Ibarra Castanedo (ScanPyramids), unpublished report to the Minister of Antiquities via Hany Halal, dated November 23, 2015.

<sup>98</sup> (1) *GPR I, 2015:* †Hirokatsu Watanabe (Terra Information, Japan), unpublished report to the Minister of Antiquities and Supreme Council of Antiquities, dated January 2, 2016. Data subsequently reviewed by Dean Goodman (Geophysical Archaeometry Laboratory, USA), Gianluca Catanzariti (3DGeoimaging, Italy), Glen Dash (Glen Dash Foundation for Archaeological Research, USA), various comments dated May 15-16 and June 3, 2016. Data reprocessed by George Ballard (GB Geotechnics, UK), report dated August 13, 2016. Reproduced below, Appendix. Popular reports on results: Hessler 2015a; Hessler 2015b.

(2) *GPR II, 2016:* Eric Berkenpas (National Geographic Society, USA), Alan Turchik (National Geographic Society, USA), Abbas Mohamed Abbas (Egyptian National Research Institute of Astronomy and Geophysics, Egypt), Dean Goodman (Geophysical Archaeometry Laboratory, USA), Glen Dash (Glen Dash Foundation for Archaeological Research, USA), Margaret Watters (Visual Environment Solutions LLC, USA), unpublished report to the Minister of Antiquities and Supreme Council of Antiquities, undated; various comments dated May 17/July 11, 2016. Data reprocessed by George Ballard (GB Geotechnics, UK), report dated August 13, 2016. Reproduced below, Appendix. Popular article on GPR I and GPR II results

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following the initial report of the National Geographic consultants: Hessler 2016a; Hessler 2016b.

(3) *GPR IIIa, 2018:* Francesco Porcelli (Polytechnic University of Turin, Italy), Cesare Comina (University of Turin, Italy), Luigi Sambuelli (Polytechnic University of Turin, Italy), Gianluca Catanzariti (Geostudi Astier s.r.l., Italy), report to the Minister of Antiquities and Supreme Council of Antiquities, February 6, 2018; published report Sambuelli et al. 2019.

(4) *GPR IIIb, 2018:* Charlie Williams, James Dunn (Terravision, UK), report to the Minister of Antiquities and Supreme Council of Antiquities, dated April 27, 2018. This work is still ongoing, with a second round of scans completed in late June, 2019; report for the Minister of Antiquities and Supreme Council of Antiquities forthcoming.

<sup>99</sup> (5) *ERT I, 2017:* Francesco Porcelli (Polytechnic University of Turin, Italy), Gianluca Catanzariti (Geostudi Astier s.r.l., Italy), Filippo Barsuglia, (Geostudi Astier s.r.l., Italy), Federico Fischanger (Geostudi Astier s.r.l., Italy), Gianfranco Morelli (Geostudi Astier s.r.l., Italy), Luigi Sambuelli (Polytechnic University of Turin, Italy), Cesare Comina University of Turin, Italy), Giuseppina Capriotti (Italian Archaeological Center, Cairo, Egypt), Ahmed Ellaithy (Ministry of Antiquities, Egypt), unpublished report to the Minister of Antiquities and Supreme Council of Antiquities, September 24, 2017. Published reports Porcelli et al. 2018; Fischanger et al. 2018.

data.”<sup>100</sup> On the basis of these results, on May 6, 2018, Egypt’s Ministry of Antiquities issued a Press Release declaring that there was now “conclusive evidence on the non-existence of hidden chambers adjacent to or inside Tutankhamun’s tomb.”<sup>101</sup> This is how the matter currently stands in the public perception.<sup>102</sup>

In reality, however, the situation is far from settled. While none of the investigations carried out so far, by any team, has produced the clear and unambiguous results anticipated by some,<sup>103</sup> the fact is that an overwhelming 80% of these tests have generated at least some indication that the eastern end of Burial Chamber J’s north wall is of a significantly different, composite structure from this same wall’s bedrock west;<sup>104</sup> while of those tests aimed at establishing the possible presence of (rubble-filled?)<sup>105</sup> voids behind and/or at a distance beyond the Burial Chamber’s west and north walls, some 77% have returned a similarly encouraging response – including ERT I of Porcelli himself.<sup>106</sup> Such consistent hints at an expanded KV 62 ground-plan – like the archaeological evidence which prompted these investigations in the first place – are not so easily dismissed.

An independent, expert assessment of the various conflicting results is obviously desirable, and for what follows I am deeply indebted to George Ballard, a leading specialist in the geophysical investigation of historic buildings and structures. It makes for encouraging reading. NR]

In May 2019 I received and was able to study a copy of Sambuelli et al., “The Third KV62 Radar Scan: Searching for Hidden Chambers Adjacent to Tutankhamun’s Tomb,”<sup>107</sup> a report on the findings of a third GPR survey at KV 62 which presents data collected during GPR surveys conducted in February 2018 (GPR IIIa). It was hoped by that report’s authors that this third survey would prove definitive, and resolve the fact that “two previous KV62 radar scans [had] proved inconclusive” – “a strong indication that

the complexity of the task was somehow underestimated.”<sup>108</sup>

An initial investigation – GPR I, undertaken in 2015 by the late Hirokatsu Watanabe, Terra Information – had previously indicated the possibility both of a physical division of, and voids behind, the north wall of the Burial Chamber (J) of KV 62, but this interpretation was poorly supported by the data quality.

The second survey was undertaken in 2016 by National Geographic – GPR II. It was unable to conclude whether any “structures of archaeological significance”<sup>109</sup> had been found, but definitively no voids were in evidence immediately behind either the north wall of the Burial Chamber or the west wall of the Treasury.

These two surveys, GPR I and GPR II, should correctly be considered as contradictory, rather than inconclusive.

In 2016 I was invited by National Geographic to consider both sets of data, and to provide an independent review of the information as it then stood. This I undertook. The report was submitted, and is published here for the first time (see Appendix).

In order to prepare my report I was provided with the original GPR I and GPR II radar data, and this I succeeded in reprocessing to give an improved view of the likely structure of the near-surface components of the Burial Chamber’s north and Treasury’s west walls.

From this fuller National Geographic data I concluded: (1) that there was some, reasonably consistent evidence that the west wall (north end) of the Treasury consisted of natural limestone, and was of a thickness similar to the stub-end of that wall which protruded into the Burial Chamber beyond the face of the north wall; and (2) that beyond this thickness lay not a void, but a more varied material than the natural limestone of the wall itself.

I was similarly able to conclude that there was, again, reasonably consistent evidence to indicate: (3) that at its eastern end the Burial Chamber’s north wall appeared generally to be composed of separate pieces of varying size; while (4) at its western end this same north wall appeared again to be of natural limestone, solid though fractured. The presence of individual rock pieces at the north wall’s eastern end indicated the probability that the structure at this point is man-made. Consistent with those observations based on data from the west wall of the Treasury, there was also no evidence of any void beyond but rather, again, a more varied material than either the natural, solid limestone or what is assumed to be man-made construction.

<sup>100</sup> Sambuelli et al. 2019, [9].

<sup>101</sup> Posted on the Facebook page of the Ministry of Antiquities, Egypt, May 7, 2018; Burzacott 2018, 7.

<sup>102</sup> E.g. Burzacott 2018; Forbes, 2018; Romey 2018.

<sup>103</sup> In the case of radar expectations, see Dash 2015.

<sup>104</sup> Thermal imaging I, 2015; GPR I, 2015; GPR II, 2016 (as reprocessed); GPR IIIb, 2018.

<sup>105</sup> Cf. the entrance corridor of KV 62 as first revealed by Carter: Reeves 1990, 76-77.

<sup>106</sup> GPR I, 2015; ERT I, 2017; GPR IIIb, 2018. The voids proposed by Porcelli’s team, at some distance from the Tutankhamun Burial Chamber, are in plan-positions which correlate tolerably well with KV 62’s envisaged form, though if they are associated their relative depths remain somewhat puzzling.

<sup>107</sup> Sambuelli et al. 2019.

<sup>108</sup> Ibid., p. [2].

<sup>109</sup> Porcelli’s term: Fischanger et al. 2018, 64.

In essence, my review of 2016 tended to confirm the observations made by National Geographic (GPR II); it did not concur with the observations of voids made by Terra Information (GPR I), although no attempt was made by me to assess the data for form or shape much beyond 600-700 mm into the wall. It appeared however that the variegated material to the rear of the walls was continuous in both north-south and east-west directions.

In discussions with various parties, and as evidenced in the calibration by National Geographic, it was noted that the basic principle of investigation and calibration applied by both investigators (GPR I and GPR II) was that any chambers that did exist beyond these walls would necessarily be voided.

It appeared to be generally considered that if voids did not exist beyond these walls, then the possibility of a hidden extension to KV 62 was not possible.

As I understand it, however, when blocking walls are encountered in such contexts – and certainly in the case of KV 62 during Carter’s excavation<sup>110</sup> – the passageways such blockings conceal are not infrequently found to be *rubble-filled*. If the north wall of the Burial Chamber, at its eastern end, represents the blocking of a passageway, then it would be reasonable to expect it to be rubble filled. Assuming this rubble to be limestone excavation spoil, then the electrical distinction and reflectivity between it and either natural limestone or limestone blocks forming a man-made wall would be small. Moreover, while not expected to produce a reflection comparable to an interface with a void, it would give rise to a weak reflection comparable to that from a geological discontinuity (fault or crack).

In Fischanger, et al., “Geophysical anomalies detected by electrical resistivity tomography in the area surrounding Tutankhamun’s tomb”<sup>111</sup> (ERT I), part of the Italian 2017/18 investigations, it was reported that ERT (electrical soil resistivity) data was collected from the surface above KV 62. This identified “two anomalies located underground a few meters from Tutankhamun’s tomb, although no evidence of a corridor or empty spaces adjoining these anomalies with KV62 was found in the ERT data.”<sup>112</sup>

Potentially, therefore, chambers *did* exist in the vicinity of the tomb, but there was no direct evidence of any voided passageway(s) connecting them to KV62.

This then appears as a *positive* result, confirming both the National Geographic GPR II investigation and my re-analysis of that data: the ERT appears to indicate the presence of previously unknown and unmapped voids or chambers in the vicinity of KV 62, which, if

man-made, could have been connected to KV 62 via blocked and backfilled passageways.

To test the validity of its data, GPR IIIa again relied essentially on comparison with the response of walls known to have open spaces on the reverse side from the point of measurement, using this as a calibration to determine whether or not a wall face is natural rock or a man-made construction. Considerable effort is put into this by the Italian team, testing performance of several frequencies and different antenna polarization modes/orientations. It appears that they have amply demonstrated that there is no *open* void within any reasonable distance of the surface of the Burial Chamber’s north or the Treasury’s west walls.

The authors of GPR IIIa devote further space to a consideration of the deficiencies of the GPR testing, and the suppression of noise and random “ghost” signals, but they do not look for any structural analysis to assist their assumptions and hypotheses.

The Italian team has not reported any attempt to test or resolve the material construction of these walls – more specifically, to identify likely differences between the Treasury’s west wall (north end), which is with reasonable confidence predicted to be natural stone, and the Burial Chamber’s north wall, which if man-made will almost certainly contain larger, individual stones as suggested by my 2016 review of GPR II below. This deficiency is unexpected, since at section “2. Material and Methods,” GPR IIIa identifies radar systems operating at three different frequency bands which were used to obtain “a very dense spatial sampling.”<sup>113</sup>

Due to the relatively short wavelengths of the transmitted radio pulses, the high frequency band of GPR IIIa should have produced data of sufficient quality and spatial definition to map and define the makeup of the first 300 mm of the structures investigated, and to have determined whether the layer immediately below the plaster consisted of separate, individual stones or solid natural rock, as carried out in my analysis of GPR II. The GPR IIIa analysis appears to have been focused entirely on identifying whether a continuous flat interface such as would be produced by a wall is or is not present; even then, only if the amplitude of the signal compared favourably with the calibration sample would such an interface be accepted as indicative of a wall.

GPR IIIa does, however, identify an intermittent planar interface at a substantial depth behind the Burial Chamber’s north wall, “the traces of a plane sub-parallel to the North wall and dipping North of about 80° (dipping plane in Fig. 4b),” which it interprets as

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<sup>110</sup> Cf. above, n. 104.

<sup>111</sup> Fischanger et al. 2018.

<sup>112</sup> Sambuelli et al. 2019, [2].

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<sup>113</sup> *Ibid.*

“clear evidence of a natural fracture belonging to a well-recognized sub-vertical E-W fracture system.”<sup>114</sup>

This interpretation contains two poorly justified assumptions: first, that because a well-known E-W fracture system exists then this plane must be part of it; and, secondly, that an interface between two materially identical limestone units which have simply fractured will produce a strong interface within the radar scan. It would also be remarkable if a natural fracture happened to occur directly parallel to the wall face.

The problem with these assumptions is that they fail to consider the possibility that the wall face might be man-made and, if so, what its form might be. Supposing, for a moment, that what lies beyond the Burial Chamber’s north wall is rubble backfill rammed tightly into a space in order to block it, then that face would necessarily not be absolutely vertical since the action of ramming in order to achieve an interlock between stones would tend to produce a collapse failure in a vertical face. An 80° angle of rest would be achievable in limestone rubble, such that it could be constructed as a temporary condition before facing off, but it would also produce an uneven surface that would require a great deal of plaster applied to create a vertical wall face. Building up a self-supporting wall of smaller stones ready to take plaster but also intended to resist any attempt to push through, thus requiring tight packing against the rubble surface, would result in a stepping out of the rear face of the wall as it was raised higher, to follow the angle of rest of the rubble fill. In short, this and the small gaps between the larger stones would quite probably result in a “linear reflection event” in the radar profiles composed of “traces of a plane sub-parallel to the North Wall.”<sup>115</sup>

None of the “representative radargrams” provided in the Italian report allow any opportunity for a proper re-analysis, for which the original data would be required. It is evident that, as support for the analysis given in GPR IIIa, the representative sections provided in the report are insufficient to provide comfort or confidence that the conclusions drawn are fully valid. In particular, the conclusions that “no evidence is found of a vertical plane (orthogonal to the scanned walls) that could be interpreted as the boundary between the rock and a blocking wall” and that “there is no evidence of plane reflectors (parallel to the scanned walls) that could be interpreted as chamber walls, like the ones seen in calibration profiles” do not appear to contradict the possibility suggested by GPR II and ERT I that passageways *do* exist but are well filled with rubble comparable to the blocking of other, similar passageways in the Valley of the Kings.

#### APPENDIX: THE REPORT FOR NATIONAL GEOGRAPHIC, 2016

In June 2016 I was provided with copies of the data from both the Terra Information (Hirokatsu Watanabe) (GPR I) and National Geographic (GPR II) surveys, together with sufficient site notes to understand the locations of each survey line and the basics of the data collection to allow a review and re-analysis.

I am satisfied that this data provides evidence indicative of “constructed” or “man-made” sections within the north wall of the Burial Chamber of Tutankhamun (KV 62), and some evidence of “man-made” construction in the west wall.

The data is by no means sufficiently extensive or intensive to allow precise definition of size and shape, but I have found reasonable correlations between both the data sets and across the parallel lines, sufficient to state categorically that there *is* evidence of a potential structure beyond the north wall plaster of the Burial Chamber.

For the detailed study, I have relied primarily on the data collected by National Geographic as this has more parallel data to work with, and, since it was collected over a narrower depth-range than the Watanabe data, there are more data bits per inch depth of chamber wall – or, put simply, there is a better opportunity to observe any structure that may exist.

The limited density and extent of the data do not make the overall data set or individual profiles easy to understand or manipulate, and care was necessarily taken in the processing to minimise any contamination of the data by the processing itself.

The eventual process scheme, applied to all the data, was relatively simple:

(1) the issue of mobile phone and other extraneous electronic noise – a frequent problem with radar data given that operation is in the VHF to UHF bands – was addressed with a narrow-band horizontal stacking filter;

(2) the 400 Mhz data was found to be sufficiently broad-band to allow an equivalent 900 MHz transducer to be synthesized from the data, clearing out much of the low frequency noise, and giving much better definition to any targets;

(3) for the purpose of graphic interface, a simple black-grey-white-grey-black transform was used: no matter how small a sinusoidal waveform is it must pass through zero, which is marked as white. This allows small signals to be identified in a large dynamic range. The black-grey (centre)-white transform palette used by National Geographic obliterated such small signals;

(4) time zero was reset to coincide with 0 mm depth for convenience;

<sup>114</sup> Ibid., 5.

<sup>115</sup> Ibid.

(5) finally a simple “background removal” filter was applied to remove any residual constant system noise.

This process maintained maximum data integrity throughout.

Two sections of data are provided here to give some idea of the progress made (Figs. 36-37). Note that the exercise has been to improve the resolution available from what is, for the purpose, a somewhat impoverished data set.

The first component of our analysis giving an indication of structure is from the data from the Treasury wall (see report on GPR II to the Minister of Antiquities and Supreme Council of Antiquities, undated: “There were no strong reflections comparable to the known void reflections recorded on the East wall of the Treasury. There was also no indication of stone masonry ... Therefore, we were unable to measure the thickness of the limestone between the Treasury and the proposed chamber”).

The data has been processed as above and the resulting plot (Fig. 36) overlain with the measured survey of the area of Treasury and Burial Chamber. Three parallel lines are shown, lying directly one above the other, each with the tomb plan overlay, with the distance scale and depth scales (based on the measured wall thickness at the jamb) normalised to the plan outline shown in yellow (the scales are in mirror because of the direction of survey in process versus the direction in plan). Somewhat confusing is that the first section of the data appears to have been collected with the antenna held in the air, or, as National Geographic reference has it, the data commences at some distance, c. 480 mm from the wall, which as can be seen from the yellow outline is completely misplaced.

The peak of the strong signal assumed by National Geographic to be the iron door frame of the Treasury appears to originate at the return between the Treasury west wall (north end) and the Burial Chamber north wall, confirming the location of that corner in the data. An interface is evident continuing from this point, parallel to the Treasury wall surface, for the full length of the wall on all three survey lines.

Between the Treasury wall surface and that interface there is no apparent detail or variation between the response at the stub wall (some 180 mm long) and the rest of the wall: it is reasonable to assume that the material is constant vertically and horizontally. This is consistent with a solid limestone unit, probably a wall, separating the Treasury from whatever lies beyond the north wall of the Burial Chamber. There is a reasonably strong, if variable, reflection from this interface at the rear of the limestone unit, beyond which is what appears to be incoherent noise typical of rubble. If the interface represents the rear face of a wall unit, then it does not appear to have an open, clear

void beyond, nor does what is beyond appear to be solid rock.

More problematic in understanding is the Burial Chamber north wall (Fig. 37). Three sets of survey lines are shown: again these are horizontal lines set parallel and with a short vertical distance separating them from each other. In the third and lowest line the data is “contaminated” by what is understood to be an area of repair by Howard Carter [see Reeves, *supra*], which is impenetrable to radar sounding; the data from this area has been removed.

The data of each set has been joined into single continuous strings, so that the original, separate lines are connected and appear as a continuous record. The fit is not easy due to variable survey data speeds and minor relocation errors.

According to the information supplied by National Geographic, the data on the western side overlaps the central zone, but is approximately continuous on the eastern side. Although this appears to have been the case on the lowest line, with the Carter repairs, continuity cannot be found at the overlap on the upper two lines; the internal evidence of the data is that there is continuity without overlap. There is, however, an obvious vertical discontinuity in both of the two upper lines which may be the correct overlap position; the “overlap” data of these two upper lines is not consistent between the western and central components. This remains a concern at the crossover point of this data. The most significant difference between the material to the western side of the discontinuity and the central side is that the antenna couple inverts, indicating a significant change in surface material: this is typical of a change in construction.

Data within the 500-700 mm depth of material from the surface at the centre and east (shaded yellow: Type A) appear generally to differ from the construction of the Treasury wall. To the west of the discontinuity (shaded orange: Type B) the wall appears “blocky” at 151cm above floor level, but the two lower levels appear comparable to the Treasury which is known to be a solid natural limestone wall. In the Type A, centre and east, the structure appears to be comparably layered at each level, and entirely dissimilar to the Treasury’s west wall: it can be noted however that there appears to be a continuous interface at about 500-600 mm in from the surface, which is common to all three components, west, centre and east, of the Burial Chamber north wall. The commonality of velocity to this interface indicates that these areas are likely to be composed of similar materials, most probably limestone, possibly solid to the west and either packed and compacted or perhaps mortared on the east.

The yellow shaded zone has a further interface

evident at all three levels, around 800- 1000 mm at 151 cm above floor level and 1000-1200 mm at 109 cm above floor, with the deeper portions bounded by a further discontinuity. This is unlike the incoherent response found beyond the Treasury wall, and indicates the probability of further structure within the wall.

Immediately to the west of this apparent structure there appears to be a large block within the wall, with a void behind it, shaded green, which may be a stack of individual stones embedded in the wall.

On the basis of this evidence, it appears that the centre to east side of the Burial Chamber's north wall is not natural rock, but has been constructed, and that the Treasury's west wall (north end) is a continuous natural stone unit extending at least some 2 m northwards from the Treasury door jamb.

In neither case is the structure identified bounded to the rear by an open void.

The probable structure detected would merit more detailed and careful examination and assessment with appropriate instrumentation, primarily a high frequency short wavelength radar. The present data is not enough to offer more than the somewhat careful if tantalizing comments made here: there is insufficient to make claims of particular details such as doorways and additional chambers. To the extent that measurements can be made, however, the analysis is robust and can be relied on.

George Ballard  
July 11, 2019 and August 13, 2016



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## THE BURIAL OF NEFERTITI? REVISED ADDENDA AND CORRIGENDA TO REEVES 2015a

[This incorporates and supersedes Reeves 2015b]

*Page 3* Adam Lowe of Factum Arte kindly draws to my attention “the very damaged area of [the north] wall that runs through the [ka] of Tutankhamun on the left of the vertical line [no. 2]” (email, July 30, 2015). “There is a large area that is new around the Ankh and legs of the [ka] – about a square meter. In Burton’s photos [sic] of the north wall [p0879c] it is present but without any brown spots. This seems to imply that the restoration was done at the time Carter opened the tomb but I have not seen any description of this being done. Strangely the area is now covered with splatters of brown paint mimicking the spots – Who did this? When and why?” Might this restoration, subsequently disguised, be evidence of a surreptitious attempt by Carter to test – perhaps on an already loosened section of decoration – that the north wall was indeed truly solid? The putative partition, of course, lies at the wall’s opposite end, towards the east. (See now above, 6-8.)

*Page 4* For the recently proposed identification of the indurated limestone bust Hanover 1970.49 as a portrait of the co-regent Ankhkheperure (+ epithet) Neferneferuaten (+ epithet), altered from a head of Nefertiti with the queen’s flat-topped crown replaced by a kingly blue crown in inferior limestone, see W. Raymond Johnson, “An Amarna Royal Head at Hanover’s Museum August Kestner: Evidence for King Ankhkheperure Neferneferuaten,” *Kmt* 26/3 (fall, 2015), 22-29.

*Page 5* Examination in raking light of the west wall itself, to the immediate right of the perceived left doorjamb, just to the right and below the foot of the second baboon from the right, reveals a series of finger marks which penetrate more deeply than one would

expect if this area were a straightforward continuation of the thinly plastered bedrock; though regarded by the Getty as evidence of plaster patches within an uneven wall (Getty Conservation Institute 2009, 14-16), their character is wholly in keeping with fingers inadvertently pressed into a plastered blocking: cf. Fig. 40, and note the GCI’s comment *ibid.* that “These impressions are less frequently observed in the upper plaster.” For images see *ibid.*, 16, and Factum Arte 2009, contact sheet 4, IMG\_4698.jpg and IMG\_4699.jpg; online at [http://www.factum-arte.com/resources/files/fa/publications\\_PDF/Tutankhamun\\_Report\\_may2009.pdf](http://www.factum-arte.com/resources/files/fa/publications_PDF/Tutankhamun_Report_may2009.pdf) (accessed July 13, 2019) = Fig. 38 (above).

*Page 6* It transpires that Kent Weeks had earlier postulated an additional side-room, though in his view never executed, beyond the west wall of the earlier, narrower (Neferneferuaten) version of chamber J: Weeks 2009, 14 and unnumbered axonometric.

*Page 6, n. 45* In raking light a gouged hand-mark may be observed immediately beneath the south wall’s magic-brick emplacement, at the point the evidence suggests any fourth side-room, if it exists, might be located. As in the note to page 5 (here above), it is deeper than ought to be feasible in an area of thinly plastered bedrock; it is wholly in keeping, however, with the sort of impressions Carter found on the tomb’s intact, thickly plastered blockings; for example, see Fig. 40. For images, see Getty Conservation Institute 2009, 16; Factum Arte 2009, contact sheet 4, IMG\_4696.jpg and IMG\_4697.jpg; online at [http://www.factum-arte.com/resources/files/fa/publications\\_PDF/Tutankhamun\\_Report\\_may2009.pdf](http://www.factum-arte.com/resources/files/fa/publications_PDF/Tutankhamun_Report_may2009.pdf) (accessed July 13, 2019) = Fig. 38 (below).

Page 7 Close scrutiny of both the original north wall and the full-size physical reference model retained by Factum Arte in Madrid suggests that the dog's-leg fissure visible in Fig. 17, top, is perhaps here misidentified. What I sought to recognize on the basis of photographs and scans as a "slippage crack" may, in fact, be merely the beginning of the natural quartz vein which continues diagonally across the wall downwards to the west. If that is the case, then obviously the conclusions I propose to draw from the feature, both in Reeves 2015a and Reeves 2015b ("Note that the dog's-leg fissure visible in Fig. 17, top lies beneath the decoration's final, yellow re-paint, indicating that shrinkage within the putative north wall partition had taken place some time before the decision was made to adapt room J as a Burial Chamber for Tutankhamun"), are incorrect, and Reeves 2015a, Fig. 17 is to be disregarded.

Page 7 My suggestion that "the Antechamber (I) and Burial Chamber (J) had originally taken the form not of separate rooms but of a single, extended corridor" is confirmed by the presence of a chiseled line on the Burial Chamber ceiling defining that corridor's course. This was first noted by the Theban Mapping Project: Weeks 2009, 9-10. For photographs, see Getty Conservation Institute 2009, 12. Interestingly, the Getty observed also the continuation of this same line in the vertical ridge (my Figs. 15-16, no. 2 = postulated left jamb of corridor continuation Y) beneath the painted surface, though without developing.

Page 7 A further hint that the area of the north wall bounded by my features 2 and 3 may represent an artificial blocking has been brought to my notice by Adam Lowe (email, July 30, 2015): "If you look at the areas of mould/microbacteria on the North wall [there] is a greater density of mould to the right hand side of the vertical line (2) than there is to the left of this line – this would imply the presence of fresher plaster and more moisture." This contrast is especially obvious on the earliest photograph we have of this scene, Burton p0879c (see above; reproduced here as Fig. 30), taken before the addition of the present fake, painted mould which now obscures the imbalance.

Pages 7-8 To understand the significance of this turn in the Egyptian mind we need in fact to orientate ourselves from *within* the tomb, i.e. from the point of view of the tomb's occupant looking *out*, rather than from that of the visitor entering *in* from the outside. Viewed from the occupant's perspective the turn would be *to the left* and thus in keeping with Egyptian dual symbolic classification, i.e. right = superior

(king), left = inferior (queen). See briefly on such classifications Reeves 1999.

Page 8 It has been put to me in conversation with colleagues that any blocking which may exist within the north wall had been erected simply to close off an *unfinished* continuation and so regularize the shape of room J. If what lay behind the north wall were simply unfinished quarrying, however, there would have been no need for this blocking to have been fitted with an inner "service doorway" of the type discerned.

Page 8 During a close inspection of the north wall in September 2015, H.E. the Minister of Antiquities, Dr Mamdouh Eldamaty, pointed out to me a clear difference in texture between the hard, gritty surface of the plaster underlying the painted surface in the precise area of my putative "service doorway", and the softer, almost "cloud-like" effect of that plaster encountered beneath the paint layers of the surrounding wall. See here Fig. 39. Significantly, this gritty surface is precisely the same as that observed on surviving fragments of the various doorway blockings which had to be broken through and removed by Carter to gain access to the various parts of the tomb. Fragments from these blockings are currently stored within the Treasury and therefore available to compare directly with the north wall's perceived "doorway" surface. For a sense of this gritty texture before it had been softened by the application of layers of paint, see Carter (and Mace) 1923-1933, I, pl. XIV and here Fig. 40.

Page 10 I am grateful to John R. Harris for the following supplementary remarks pertinent to the proposed female ownership of the north wall painting in its original, white-ground manifestation (letter, August 21, 2015): "I'm not sure how far Amarna conventions will hold at this stage, or in this context, but it is clearly the case that the Osirid 'king' (Figure 27) has a 'female,' concave curve at the back of the neck (cf. [John R. Harris, "Nefertiti Rediviva,"] *Acta Orientalia* [Copenhagen] 35[1973], pp. 7-8 and nn. 13, 14). The sem-priest on the other hand appears to have a far more angular 'male' contour – though it isn't pronounced."

Page 14 Add the following reference:

Harris, John R.

1973 "Nefernefruaten," *Göttinger Miszellen* 4, 15-17

Page 14 The correct reference is:

Harris, John R.

2008 "Apropos Nefertiti (2): Smenkhkara Resartus," *Papyrus* 28/2, 14-23

*Page 14* The correct reference is:

Huppertz, Alexander, Dietrich Wildung, Barry J. Kemp, Tanja Nentwig, Patrick Asbach, Franz Maximilian Rasche, Bernd Hamm

2009 “Nondestructive Insights into Composition of the Sculpture of Egyptian Queen Nefertiti with CT,” *Radiology* 251/1 (April), 233-240

*Page 15* The updated reference for Reeves in press a is:

Reeves, (Carl) Nicholas

2015 “Tutankhamun’s Mask Reconsidered,” in Adela Oppenheim and Ogden Goelet, eds.), *The Art and Culture of Ancient Egypt: Studies in Honor of Dorothea Arnold* (New York: *Bulletin of the Egyptological Seminar*, 19), 511-526

*Page 15* The updated reference for Reeves in press b is:

Reeves, (Carl) Nicholas

2017 “The Coffin of Ramesses II,” in Alessia Amenta and Hélène Guichard, eds., *Proceedings First Vatican Coffin Conference 19-22 June 2013* (Vatican City: Edizioni Musei Vaticani), II, pp. 425-438

*Figure 16* The caption should read “(negative).”

*Figure 19* The caption should read “highlighting in yellow.”

*Figure 20* A revised approximation of the putative form and location of the north wall blocking with inner “service doorway” may be seen in Fig. 39 here.





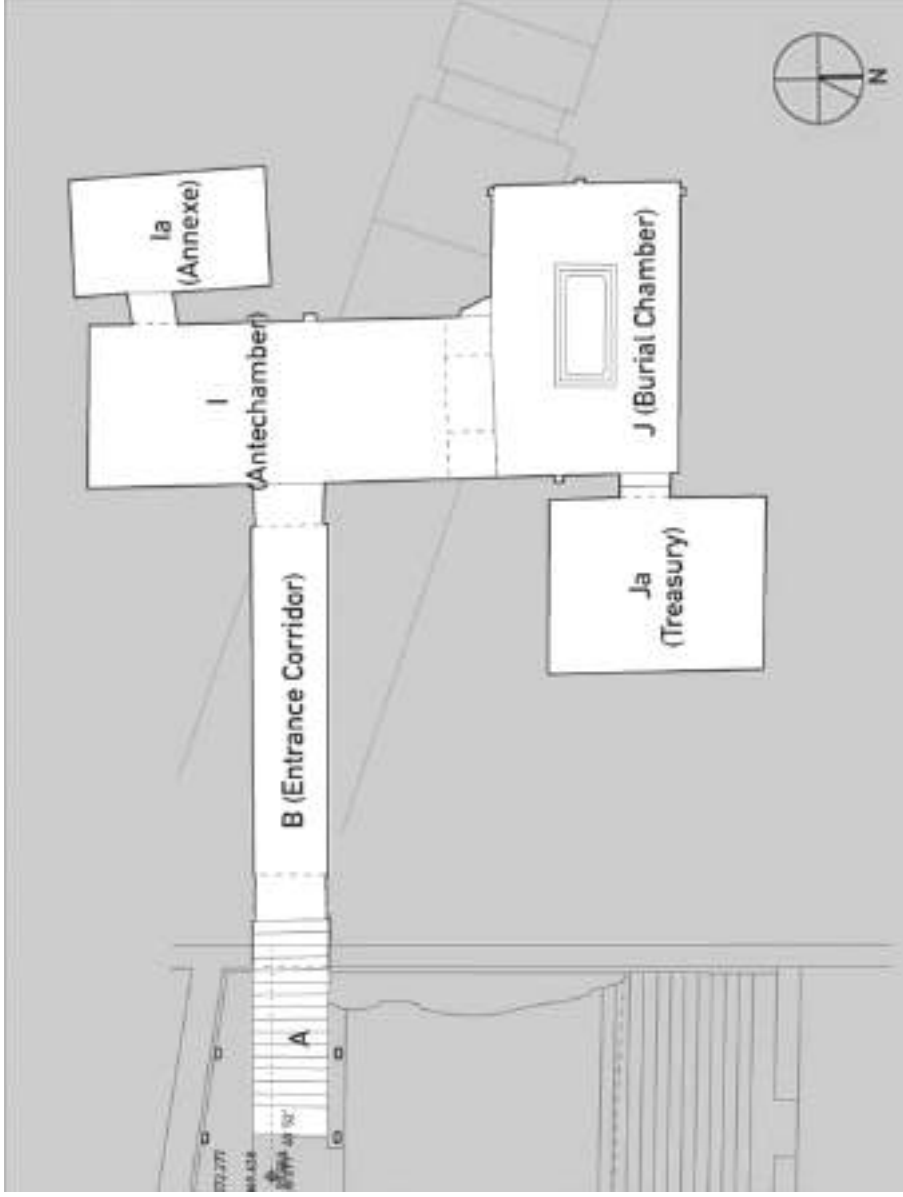


Fig. 1. Plan of the tomb of Tutankhamun (KV 62) as at present known  
(Weeks 2003, sheet 69/70 / <http://www.thebanmappingproject.com/>, with emendations,  
copyright © Theban Mapping Project)

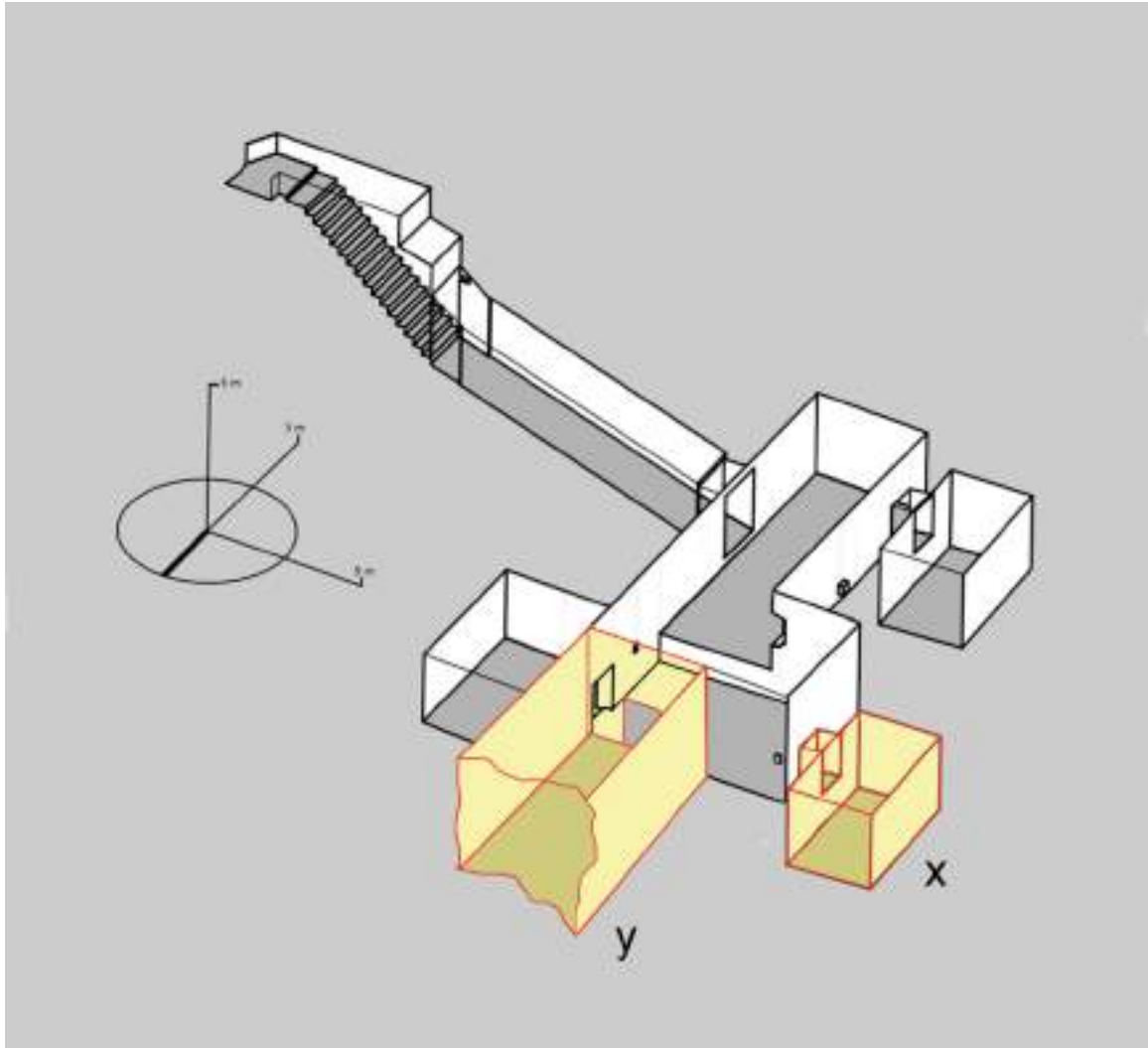


Fig. 2. The tomb of Tutankhamun (KV 62): (x) proposed new chamber behind the decorated west wall of the Burial Chamber (J); (y) potential continuation of the tomb beyond the Burial Chamber's decorated north wall (Weeks 2003, sheet 69/70 / <http://www.thebanmappingproject.com/>, with additions, copyright © Theban Mapping Project)



Fig. 3. Burial Chamber (J), KV 62: north wall, painted decoration  
(<http://www.highbres.factum-arte.org/Tutankhamun/>, copyright © Factum Arte/Ministry of Antiquities, Egypt)

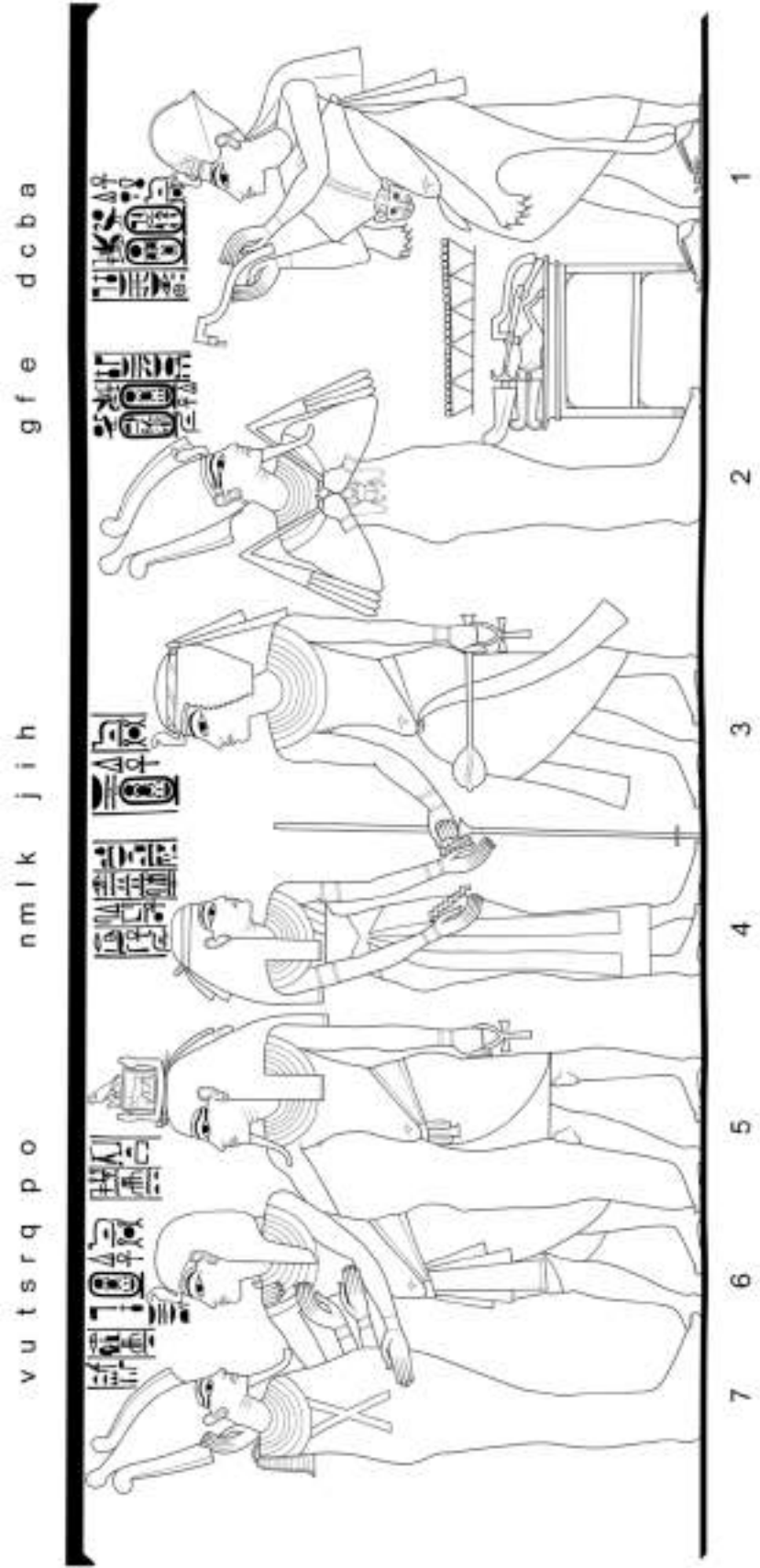


Fig. 4. Burial Chamber (J), KV 62: north wall, painted decoration (facsimile), showing numbered figures [1]-[7] and lettered columns of text [a]-[v]  
 Drawing by Lily Jung, copyright © Lily Jung

	North wall	South wall	East wall	West wall
<b>a</b>	Upper paint layers	Upper paint layers	Upper paint layers	Upper paint layers
<b>b</b>	Yellow background painted around the figures	Yellow background (-0.01-0.06 mm)	Yellow background (-0.01-0.03 mm)	Yellow background (-0.01-0.03 mm)
<b>c</b>	White ground layer (-0.01-0.03 mm)	Layer not present	White ground layer (-0.005-0.05 mm)	White ground layer (-0.005-0.02 mm)
<b>d<sub>1</sub></b>	Layer not present	Fine buff plaster applied as a wash (-0.02-0.1 mm)	Fine buff plaster applied as a wash (-0.03-0.1 mm)	Fine buff plaster applied as a wash (-0.06-0.09 mm)
<b>e</b>	Fine gray plaster applied as a wash (-0.1-0.7 mm)	Layer not present	Layer not present	Layer not present
<b>f<sub>1</sub></b>	Layer not present	Coarse gray plaster (-0.5-1.5 mm)	Coarse gray plaster (thickness unknown)	Coarse gray plaster (thickness unknown)
<b>d<sub>2</sub></b>	Fine buff plaster (-1-3 mm)	Fine buff plaster (-0.1-2 mm)	Fine buff plaster (-1.5-2 mm)	Fine buff plaster (-1-1.5 mm)
<b>f<sub>2</sub></b>	Coarse gray plaster (thickness unknown)	Layer not present	Layer not present	Coarse gray plaster (thickness unknown)
<b>g</b>	Coarse brown plaster (thickness unknown)	Coarse brown plaster (thickness unknown)	Coarse brown plaster (thickness unknown)	Coarse brown plaster (thickness unknown)
<b>h</b>	Limestone	Limestone	Limestone	Limestone

\*d<sub>1</sub>, d<sub>2</sub>, and f<sub>1</sub>, f<sub>2</sub> indicate plasters of the same composition that can occur twice within the stratigraphy of a wall. Not every area will necessarily have both layers.

Fig. 5. Stratigraphy of the Burial Chamber (J) walls, KV 62, as established by the Getty Conservation Institute, from the uppermost painted surface through to the limestone support (After Wong et al. 2012, S326, Fig. 5, copyright © Getty Conservation Institute)

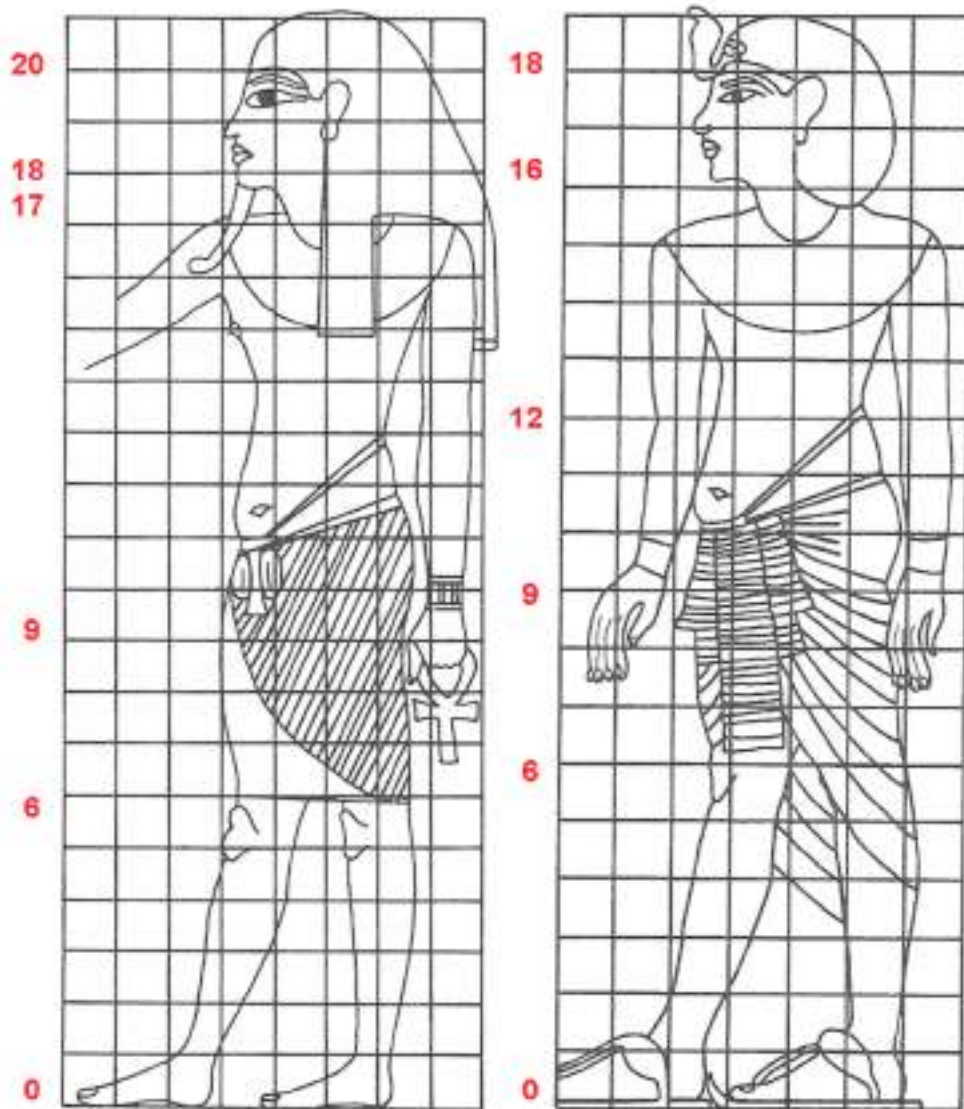


Fig. 6. The two proportional scales encountered in the decoration of the Burial Chamber (J), KV 62: (left) north wall, figure [5] – Amarna 20-square grid (associated with Phase I) ; (right) south wall, figure [2], post-Amarna 18-square grid (associated with Phase II)

– (After Robins 1994, Figs. 6.46 and 6.45 (reversed), copyright © Gay Robins)

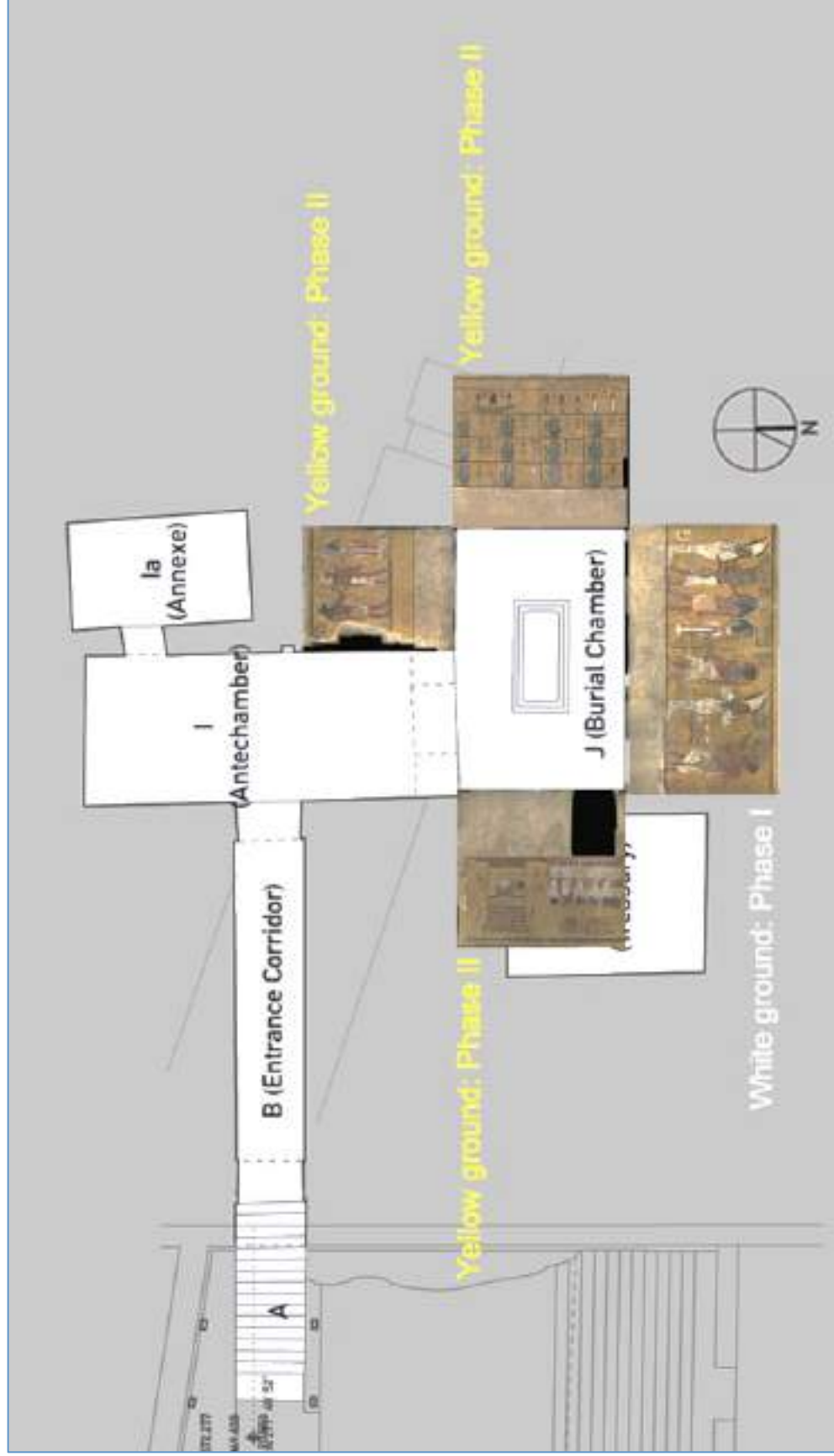


Fig. 7. Plan of KV 62, showing the two phases (I – white ground; II – yellow ground) of the Burial Chamber (J) decoration (Weeks 2003, sheet 69/70 / <http://www.thebanmappingproject.com/>, copyright © Theban Mapping Project, with emendations and superimposed images from <http://www.hghres.factum-arte.org/Tutankhamun/>, copyright © Factum Arte/Ministry of Antiquities, Egypt)

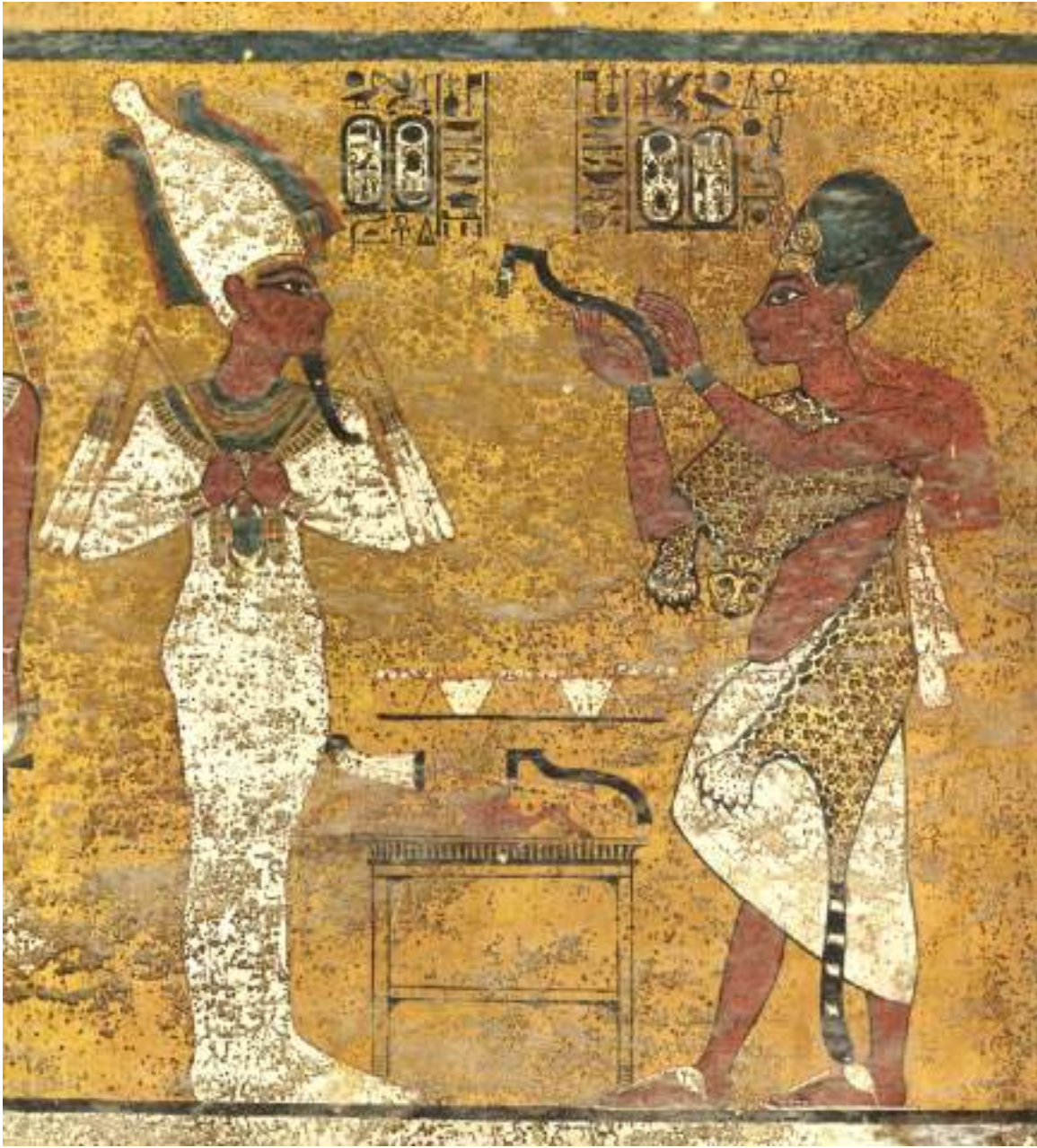


Fig. 8. Burial Chamber (J), KV 62: north wall, Scene 1, painted decoration  
(<http://www.highres.factum-arte.org/Tutankhamun/>, copyright © Factum Arte/Ministry of Antiquities, Egypt)



g f e d c b a

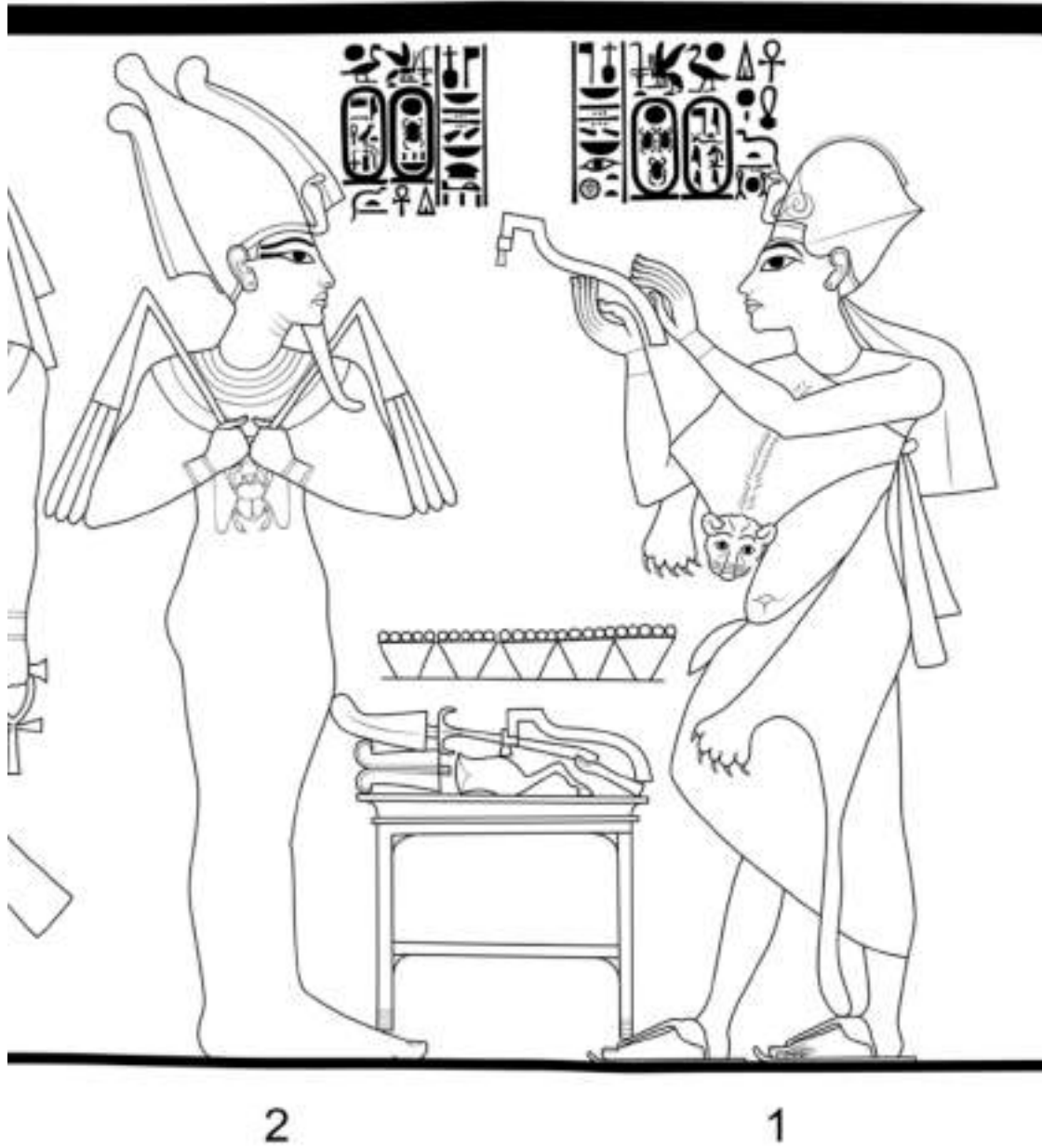


Fig. 9. Burial Chamber (J), KV 62: north wall, Scene 1, painted decoration (facsimile)  
(Drawing by Lily Jung, copyright © Lily Jung)



Fig. 10. The face of the ministering *sem*-priest (“Ay”) [1] on the north wall of the Burial Chamber (J), KV 62, showing the same plumpness and under-grooved chin as an early image of the young Tutankhamun from KV 62 (Left: <http://www.highres.factum-arte.org/Tutankhamun/>, detail, copyright © Factum Arte/Ministry of Antiquities, Egypt. Right: Carter MSS, no. 008, Burton photograph p1880, detail, reversed, copyright © Griffith Institute, Oxford)



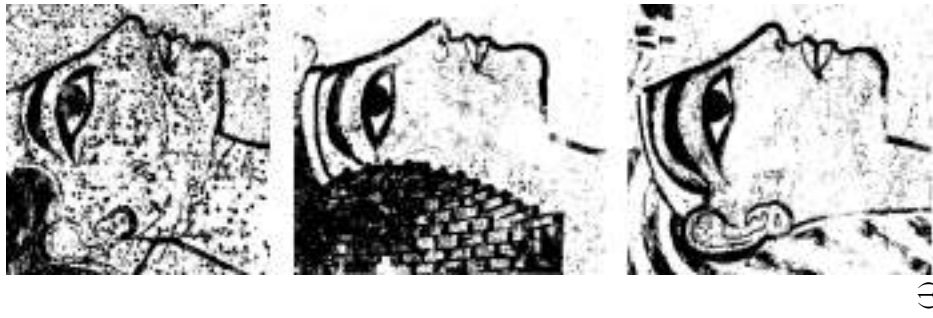
Fig. 11. The face of the Osirid king [2] on the north wall of the Burial Chamber (J), KV 62, compared with the face of the famous Nefertiti bust to illustrate shared lines of brow and nose, straight jawline, small, rounded chin, and significant “oromental groove” (Left: <http://www.highres.factum-arte.org/Tutankhamun/>, detail, copyright © Factum Arte/Ministry of Antiquities, Egypt. Right: Berlin 21300, detail, photo by Magnus Manske © Magnus Manske)



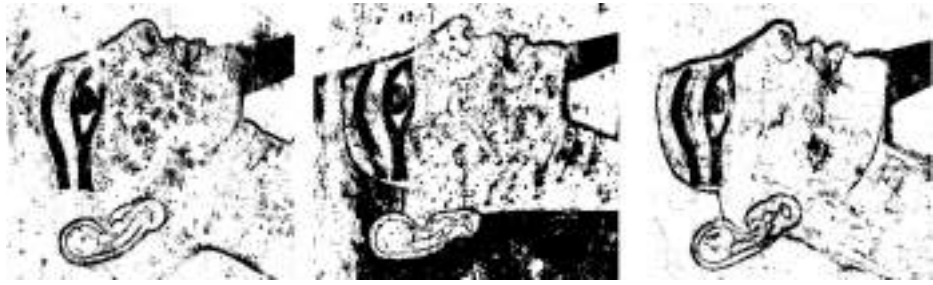
Fig. 12. The figure of the mummified “Tutankhamun” [2] on the north wall of the Burial Chamber (J), KV 62, showing the similarities with the Osiris on the left-hand door-panel of Tutankhamun’s second shrine (Carter object no. 237) – a shrine originally prepared for Nefertiti as the co-regent Neferneferuaten (Left: <http://www.highres.factum-arte.org/Tutankhamun/>, detail, copyright © Factum Arte/Ministry of Antiquities, Egypt). Right: Hawass and Vannini 2007, 84, detail, reversed, copyright © Sandro Vannini)



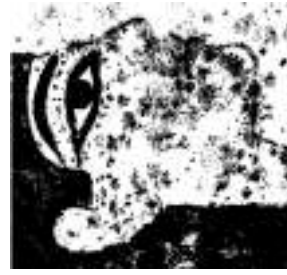
Fig. 13. Left: Detail showing the cartouched nomen of Ay [b], north wall of the Burial Chamber (J), KV 62, showing underlying reed-leaf hieroglyph (Gardiner M17). Right: cartouched nomen of Tutankhamun [g], with equivalent hieroglyph ringed (<http://www.highres.factum-arte.org/Tutankhamun/>, copyright © Factum Arte/Ministry of Antiquities, Egypt, right reversed)



(1)  
[1], [3], [6] (all reversed)



(2)  
[2], [5] (reversed), [7]



(3)  
[4]

Fig. 14. Conspectus of faces, Burial Chamber (I), KV 62, north wall: (1) Tutankhamun – figures [1], [3], [6]; (2) Nefertiti – figures [2], [5], [7]; (3) Meritaten(?) – figure [4] (after <http://www.hghres.factum-arte.org/Tutankhamun/>, copyright © Factum Arte/Ministry of Antiquities, Egypt)

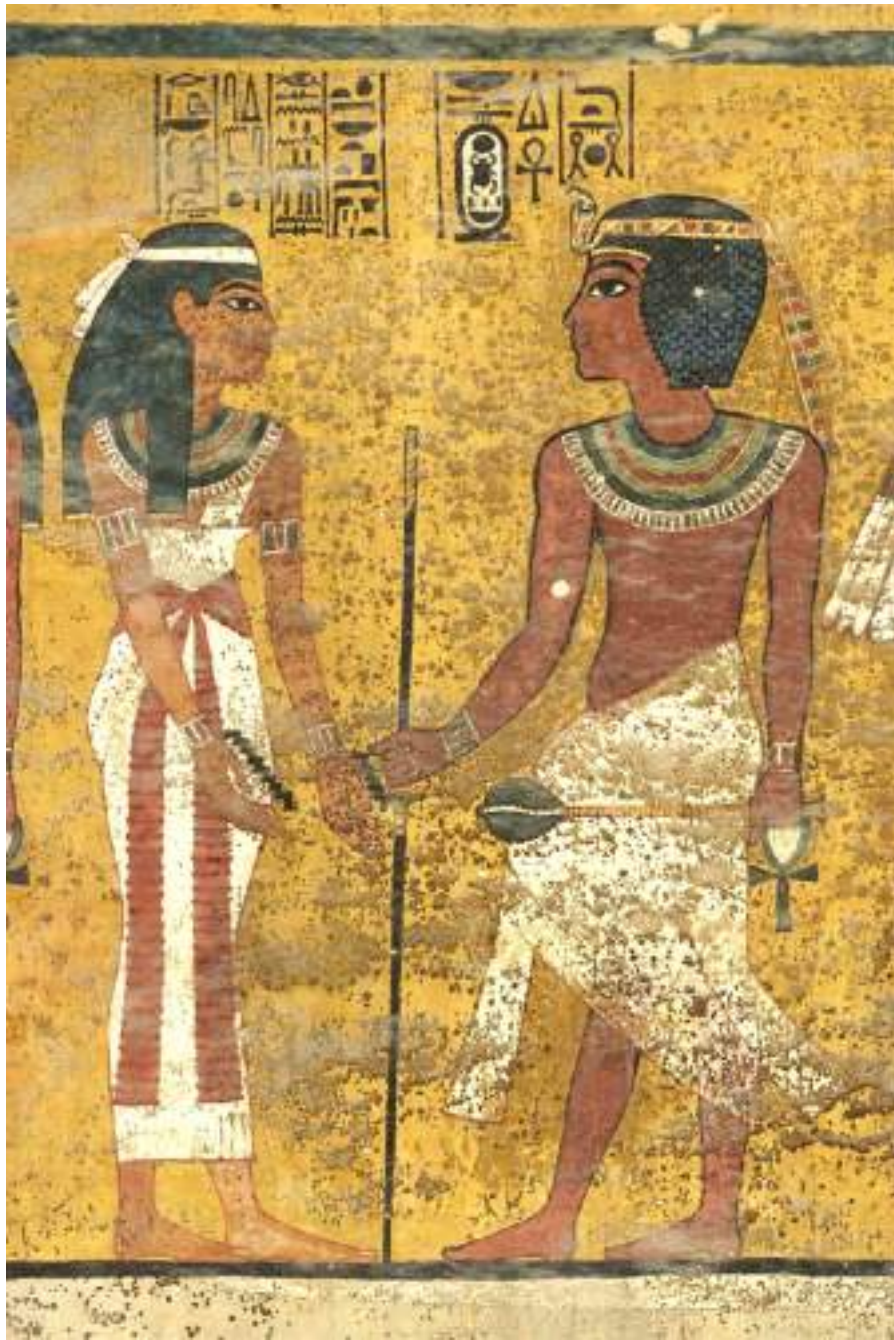


Fig. 15. Burial Chamber (J), KV 62: north wall, Scene 2, painted decoration  
(<http://www.highres.factum-arte.org/Tutankhamun/>, copyright © Factum Arte/Ministry of Antiquities, Egypt)

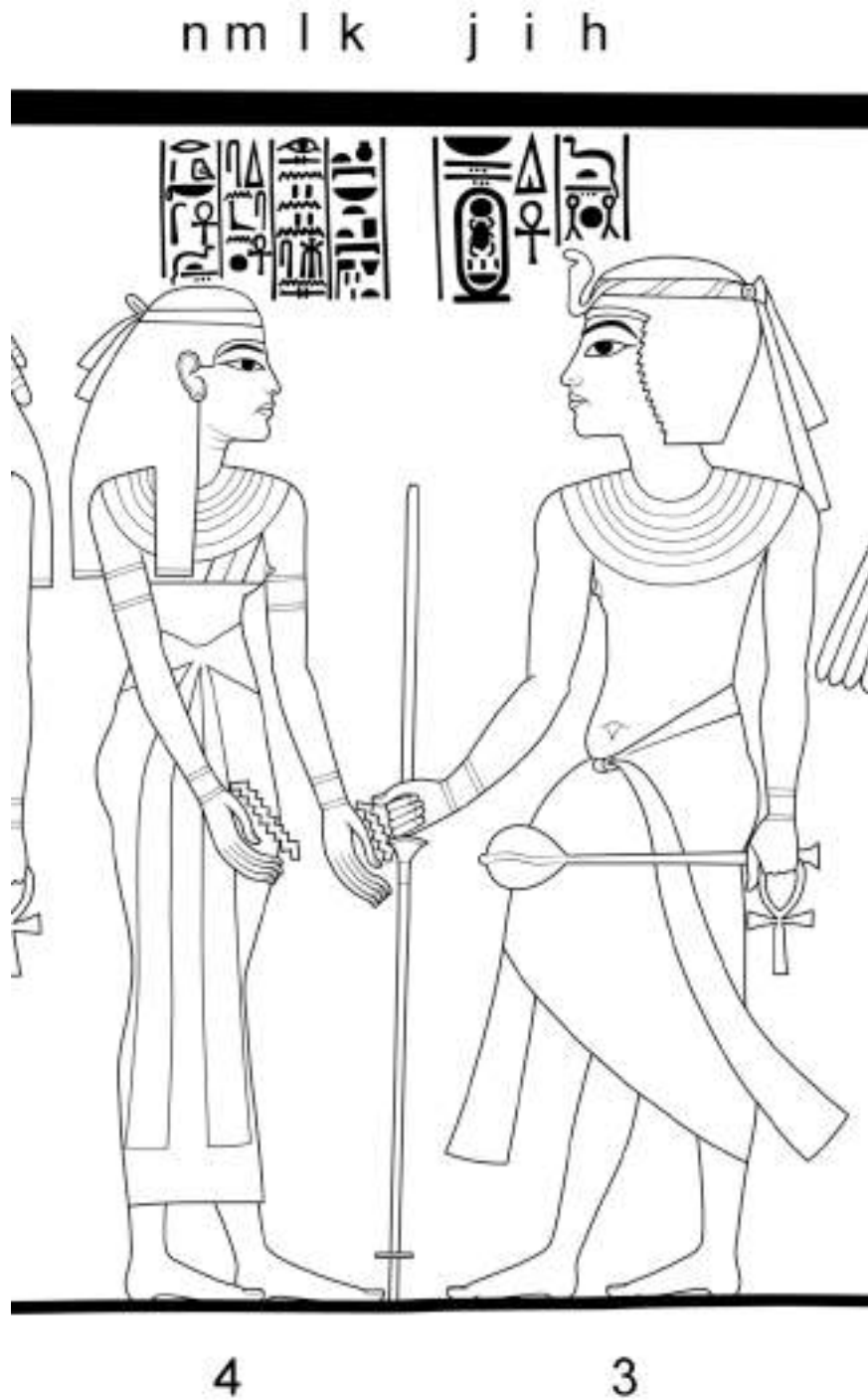


Fig. 16. Burial Chamber (J), KV 62: north wall, Scene 2, painted decoration (facsimile)  
(Drawing by Lily Jung, copyright © Lily Jung)



Fig. 17. Burial Chamber (J), KV 62: north wall, figure [3]. Upper half composed employing an 18-square grid; lower half employing a 20-square grid in common with the rest of this wall's decoration (<http://www.highres.factum-arte.org/Tutankhamun/>, with additions, copyright © Factum Arte/Ministry of Antiquities, Egypt)



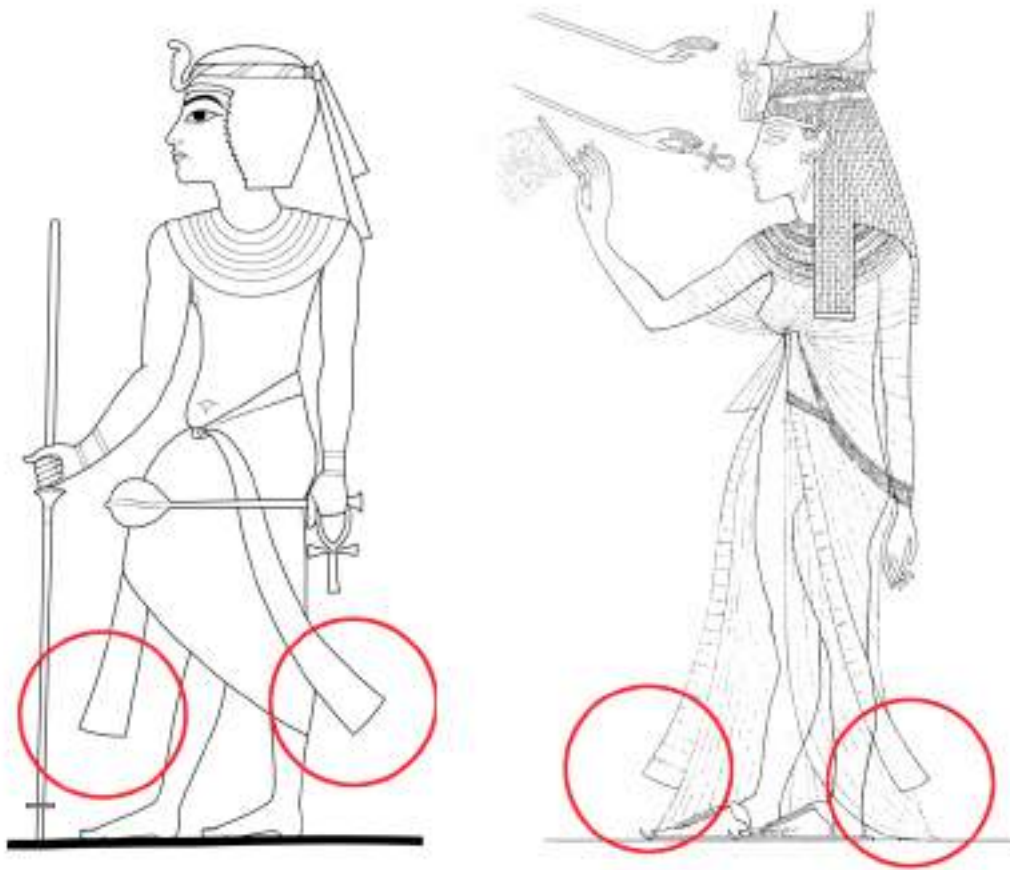


Fig. 18. (Left) Burial Chamber (J), KV 62: north wall, figure [5]; (right) Shrine detail, KV 55 (Tiye). Note the sash ends, suggesting figure [5]'s Phase I employment of a similar, full-length costume (Left: drawing by Lily Jung, detail, with additions, copyright © Lily Jung. Right: drawing by Ernest Harold Jones, after Davis 1910, pl. XXXIII)



Figs. 19. Burial Chamber (J), KV 62: north wall. Lower half of figure [3], showing line of darker yellow over-paint and trace of over-painted hem (<http://www.highres.factum-arte.org/Tutankhamun/>, details, with additions, copyright © Factum Arte/Ministry of Antiquities, Egypt)

v u t s r q p o

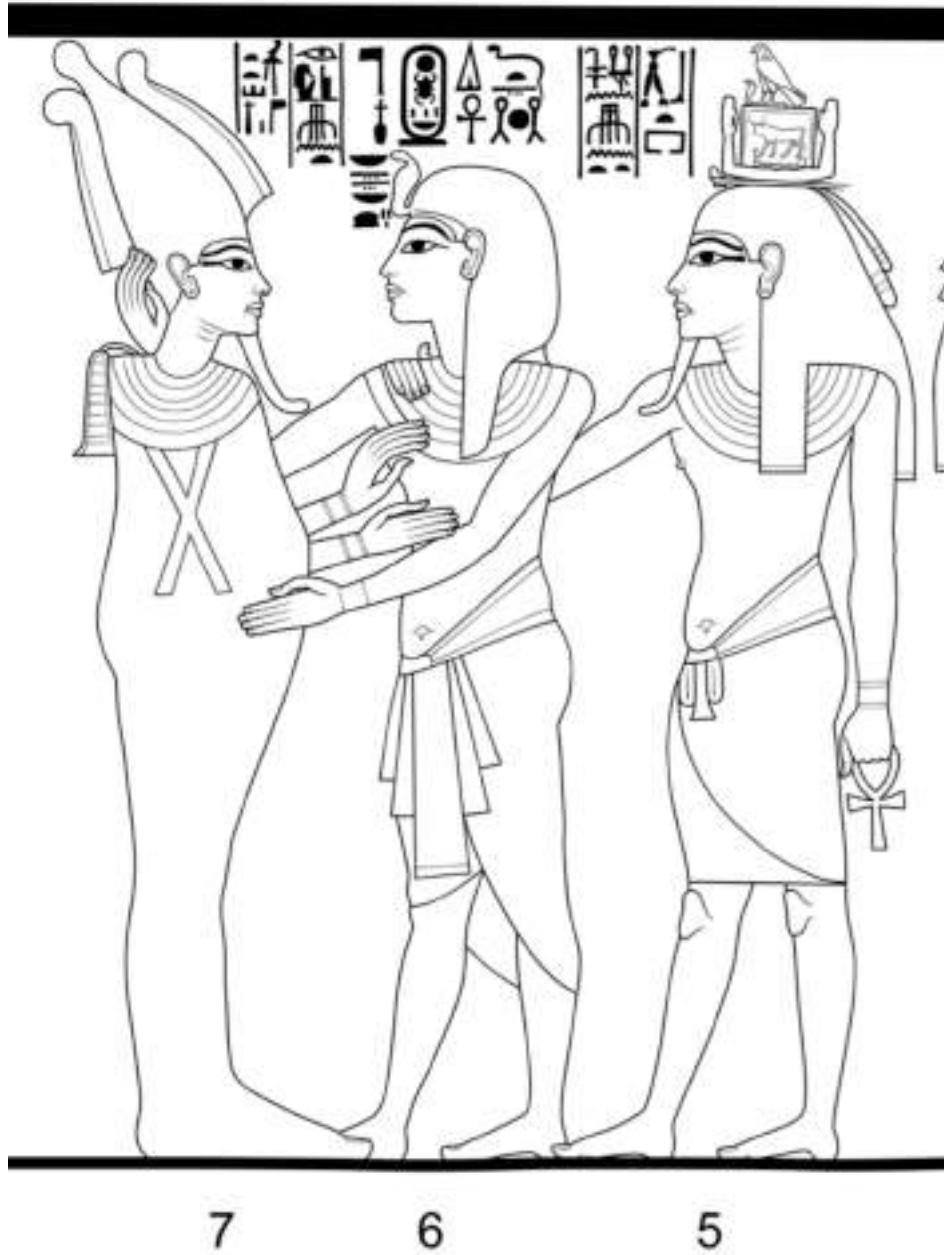


Fig. 20. Burial Chamber (J), KV 62: north wall, Scene 3, painted decoration (facsimile)  
(Drawing by Lily Jung, copyright © Lily Jung)

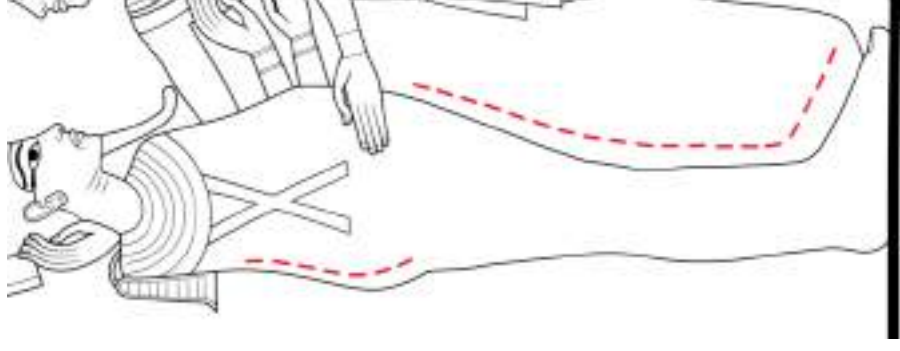


Fig. 21 . Burial Chamber (J), KV 62: north wall, Scene 3, painted decoration. (Left) contrasted overlay of photograph on relief surface, showing Phase I outline of figure [7]. (Centre) Photograph taken in raking light, showing Phase I outline of figure [7] foot. (Right) Scene 3 (facsimile), showing (in red broken line) the Phase I silhouette of figure [7] (Left: <http://www.highbres.factum-arte.org/Tutankhamun/>, detail, manipulation by Peter Gremse, ConceptZone Kommunikationsdesign, copyright © Factum Arte/Ministry of Antiquities, Egypt. Centre: Getty Conservation Institute, Image TUT\_BC\_Nw\_MI\_008\_05\_rak.jpg, copyright © Getty Conservation Institute/Ministry of Antiquities, Egypt. Right: drawing by Lily Jung, detail, with additions, copyright © Lily Jung)



Fig. 22. Burial Chamber (J), KV 62: north wall, painted decoration. Detail showing the feet of figures [5] (above) and [6] (below) – the former clearly painted on the original Phase I white background of this scene, the latter on the Phase II yellow over-paint, identifying it as a subsequent addition (<http://www.highres.factum-arte.org/Tutankhamun/>, details, copyright © Factum Arte/Ministry of Antiquities, Egypt)

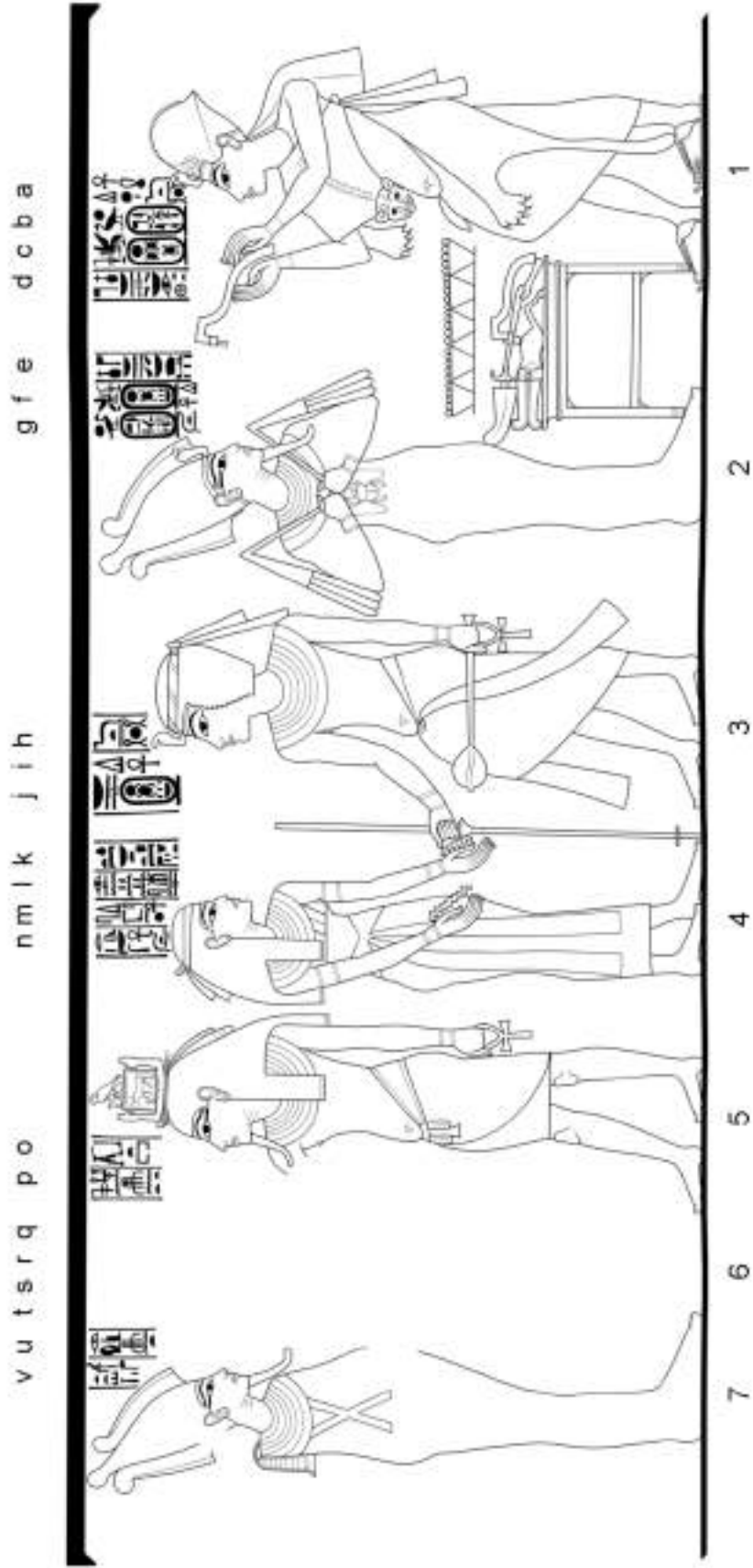


Fig. 23. Burial Chamber (J), KV 62: north wall, painted decoration (facsimile), showing how decoration balance is restored by the removal of figure [6]  
 Drawing by Lily Jung, with additions, copyright © Lily Jung

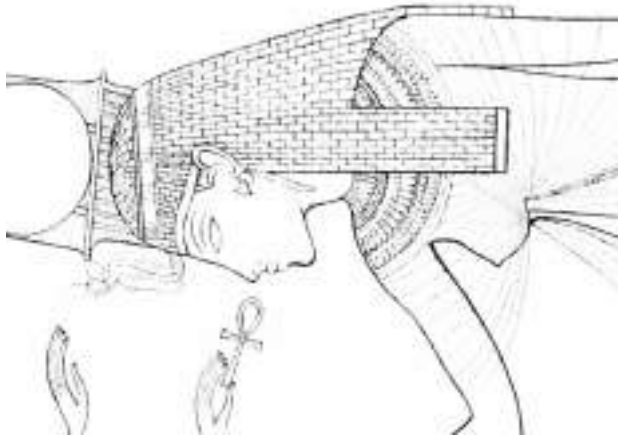
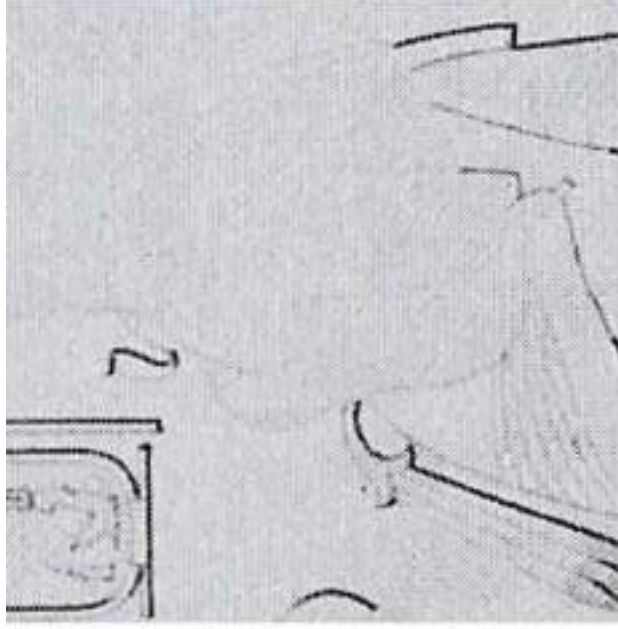


Fig. 24. Tiye, Teye and Nefertari wearing versions of the tripartite wig in a funerary context: on the KV 55 shrine, in WV 23 (Ay), and in QV 66 (Nefertari) (Left: drawing by Ernest Harold Jones, after Davis 1910, pl. XXXIII. Centre: after Lepsius 1972, VI, pl. 113. Right: after Dondelinger 1973, 63)



Fig. 25. Burial Chamber (J), KV 62: north wall, contrasted detail of area above figures [4] and [5] showing traces of Phase I under-paint/Phase II drafting  
(<http://www.hghres.factum-arte.org/Tutankhamun/>, copyright © Factum Arte/Ministry of Antiquities, Egypt)





Fig. 26. Burial Chamber (J), KV 62. (Left) south wall, figure [3] and (right) north wall, figure [5] (before restoration), showing identical Phase II kilts  
(Left: <http://www.highres.factum-arte.org/Tutankhamun/>, detail, copyright © Factum Arte/Ministry of Antiquities, Egypt. Right: Carter MSS, Carter/Burton photograph p0879c, detail, copyright © Griffith Institute, Oxford)



Fig. 27. Burial Chamber (J), KV 62: north wall, showing repainted areas (in pink), incidental damage (blue), cracks (green) and injection holes for consolidants (red) (<http://www.highres.factum-arte.org/Tutankhamun/>, copyright © Factum Arte/Ministry of Antiquities, Egypt)

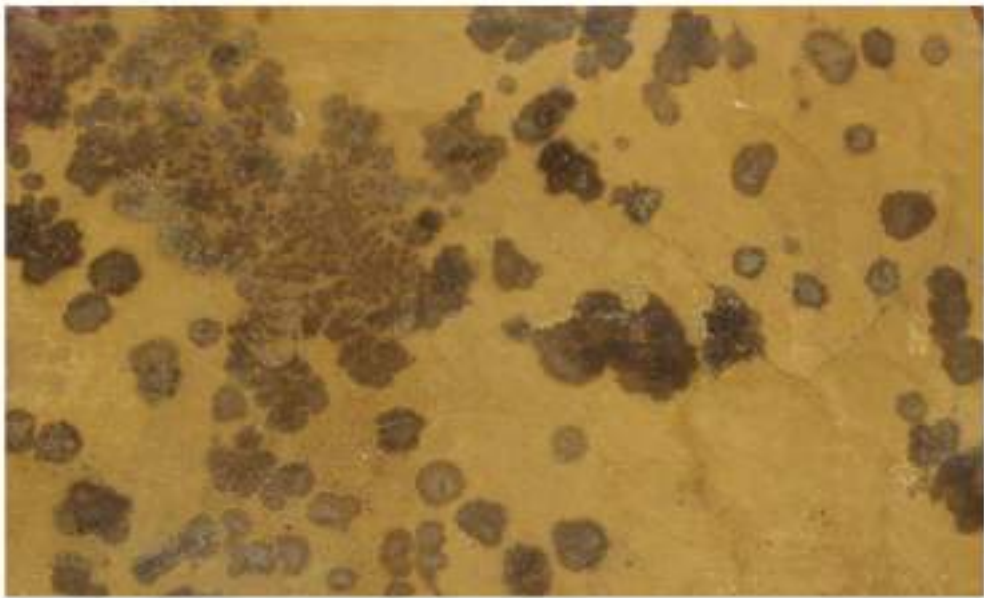


Fig. 28. Burial Chamber (J), KV 62: north wall, showing (above) genuine mould-growth and (below) fake, painted mould-growth added by Carter to the areas he restored subsequent to his investigation behind (<http://www.highres.factum-arte.org/Tutankhamun/>, details, copyright © Factum Arte/Ministry of Antiquities, Egypt)



Fig.29. Burial Chamber (J), KV 62: north wall, detail of figure [5] showing fake, painted mould-growth and use of a modern “fitch” producing lines with tapering ends  
(<http://www.highres.factum-arte.org/Tutankhamun/>, detail, copyright © Factum Arte/Ministry of Antiquities, Egypt)



Fig. 30. Burial Chamber (I), KV 62: north wall: photograph taken by either Howard Carter or Harry Burton, c. 1932-1936, showing the decoration in its original, pre-restoration state  
(Carter MSS, Carter/Burton photograph p0879c, copyright © Griffith Institute, Oxford)

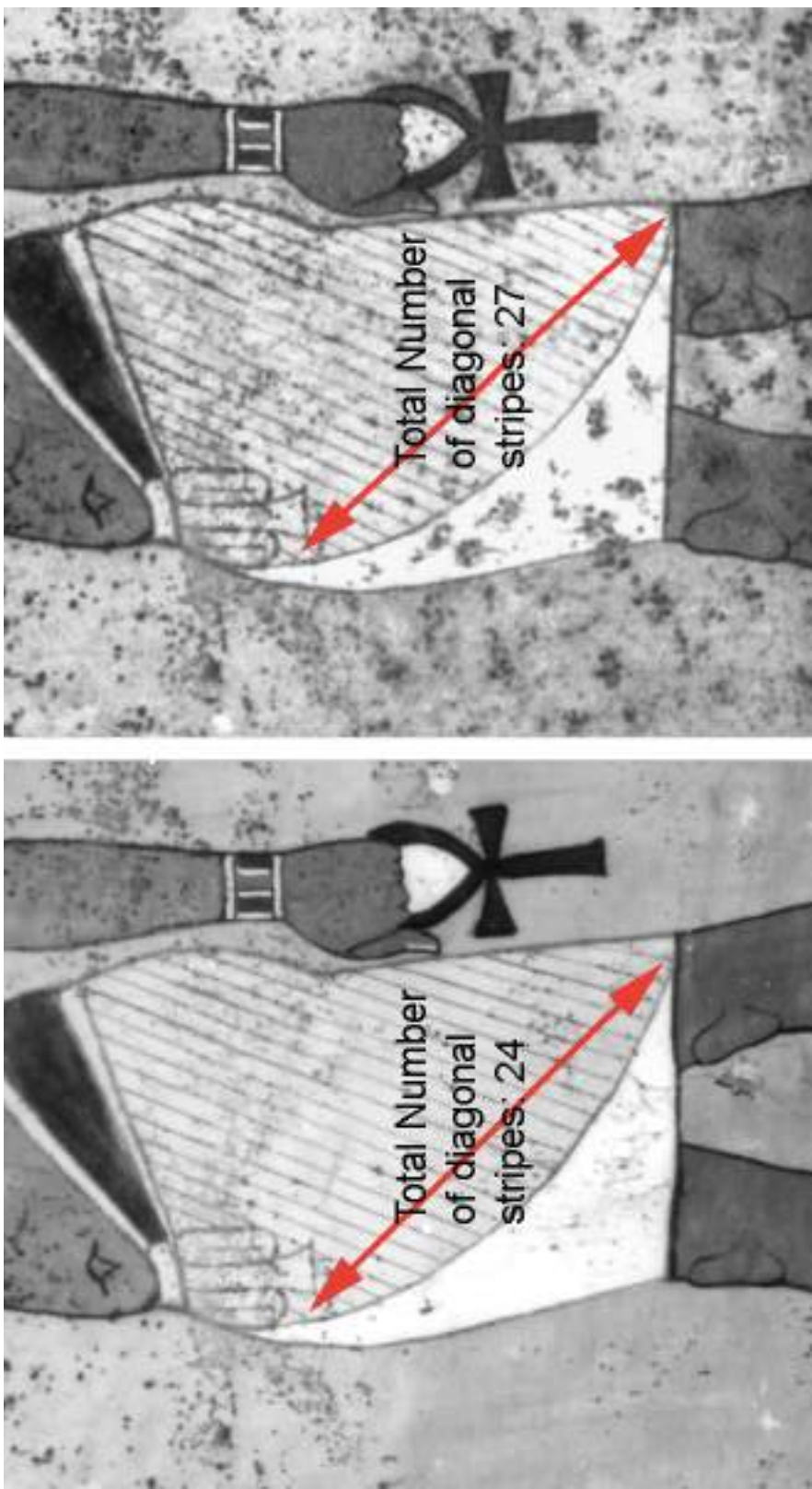


Fig. 31. Burial Chamber (I), KV 62: north wall, details of figure [5]. (Left) pre-restoration, c. 1932-1936 (see Fig. 30); (right) post-restoration, 1936 (see Fig. 32). Note the several differences, the most obvious being the stripe-count on the respective kilts  
 (Left: Carter MSS, Carter/Burton photograph p0879c, detail, with additions, copyright © Griffith Institute, Oxford. Right: Oriental Institute Egyptian Expedition, University of Chicago, OI 6409, detail, with additions, copyright © Oriental Institute, University of Chicago)



Fig. 32. Burial Chamber (I), KV 62: north wall: photograph taken by the Egyptian Expedition of the Oriental Institute, Chicago House, summer 1936, showing the decoration in its post-restoration state  
(Oriental Institute Egyptian Expedition, University of Chicago, OI 6409, detail, with additions, copyright © Oriental Institute, University of Chicago)

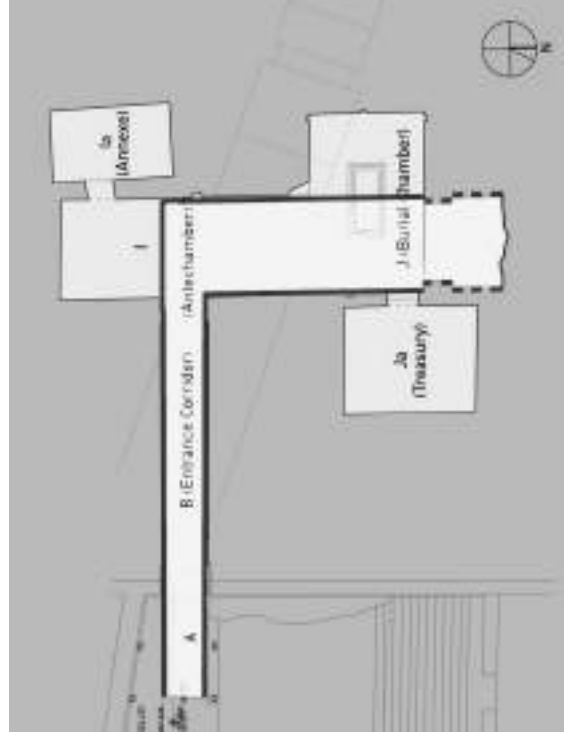
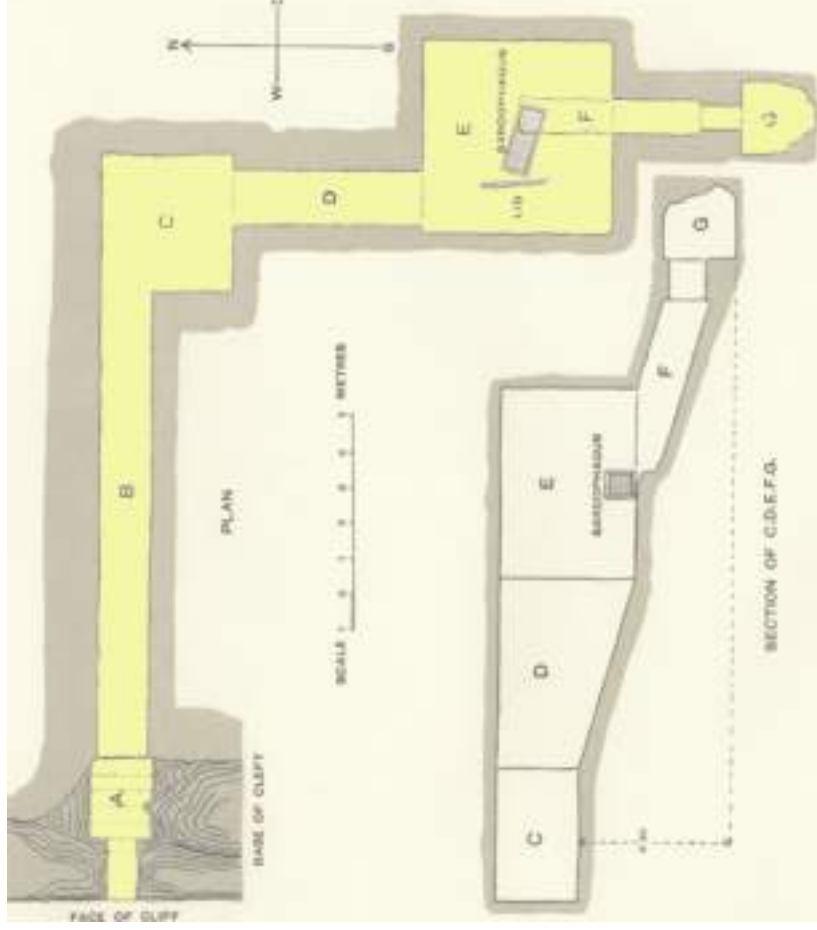


Fig. 33. (Left) The right-turning, L-shaped core of KV 62 ((Nefertiti/Neferneferuaten phase) compared with (right) the right-turning, L-shaped plan of W A D prepared for Hatshepsut as principal consort of Thutmose II

(Left: Weeks 2003, sheet 69/70 / <http://www.thebanmappingproject.com/>, with emendations and additions, copyright © Theban Mapping Project. Right: original plan after Carter 1917, Pl. XXI, with emendations and additions, copyright © Egypt Exploration Society)



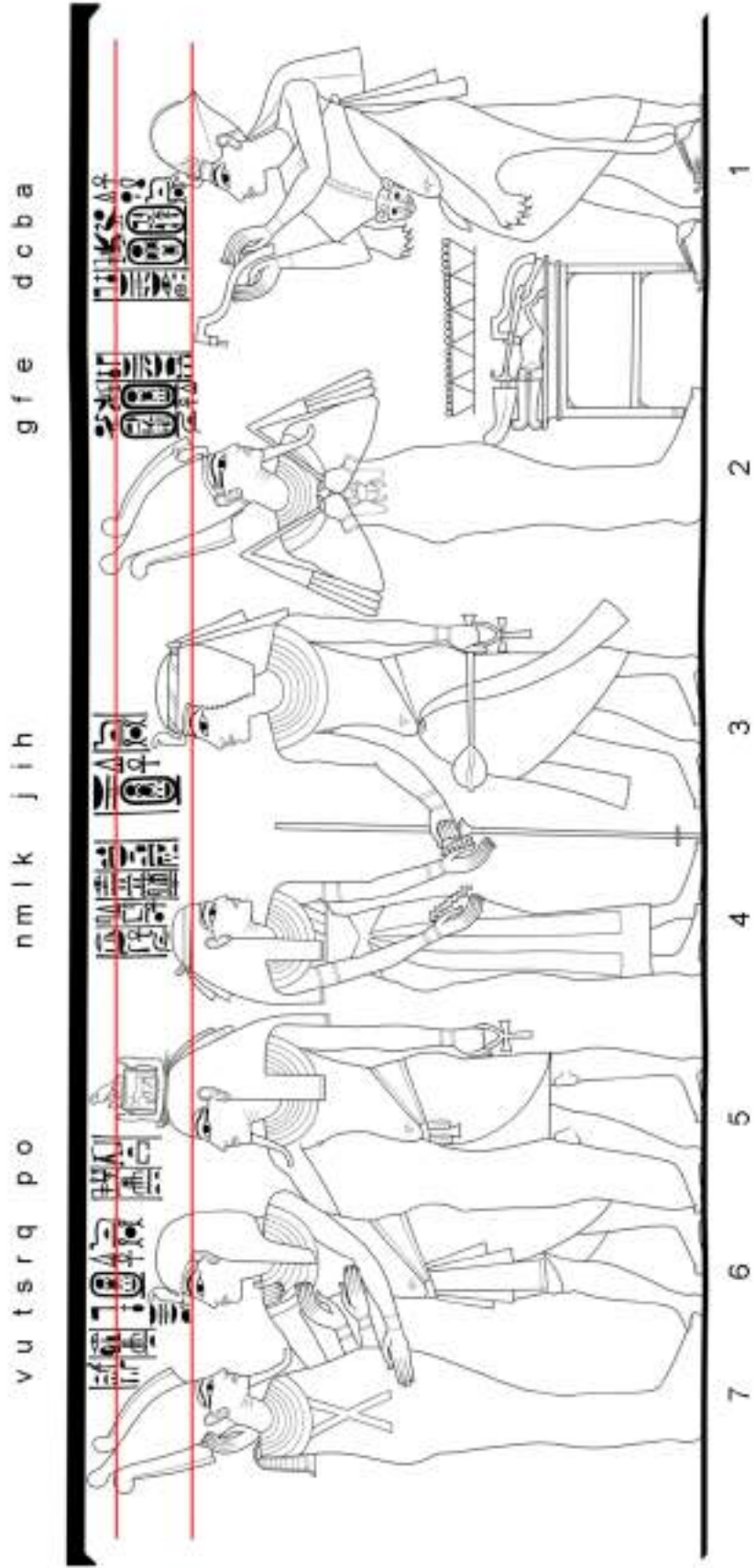


Fig. 34. Burial Chamber (J), KV 62: north wall, painted decoration (facsimile), showing alignment of the cartouches in Scenes 1 and 2, and the misalignment in Scene 3  
 Drawing by Lily Jung, with additions, copyright © Lily Jung

v u t s r q p o n m i k j i h g f e d c b a

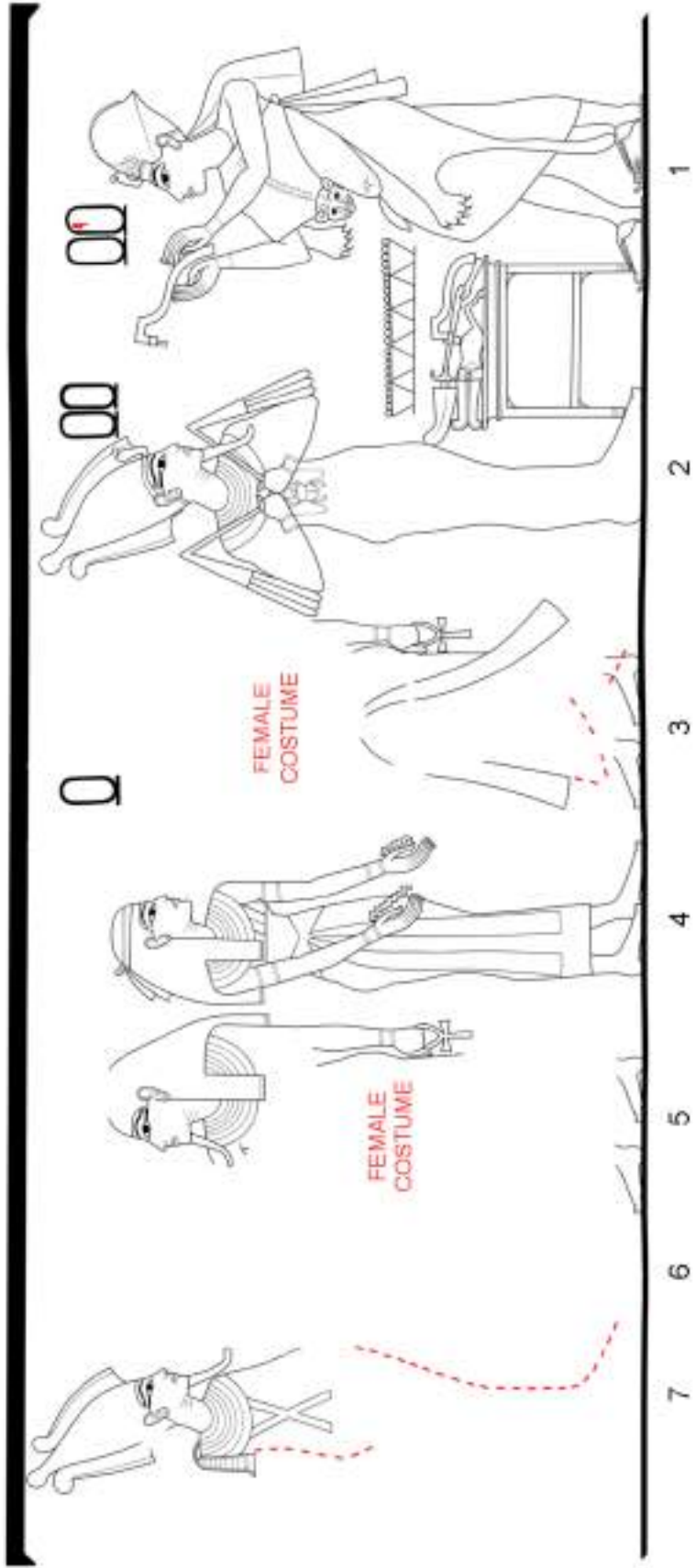


Fig. 35. Burial Chamber (I), KV 62: north wall, painted decoration (facsimile), showing surviving Phase I content (Drawing by Lily Jung, adapted, copyright © Lily Jung)

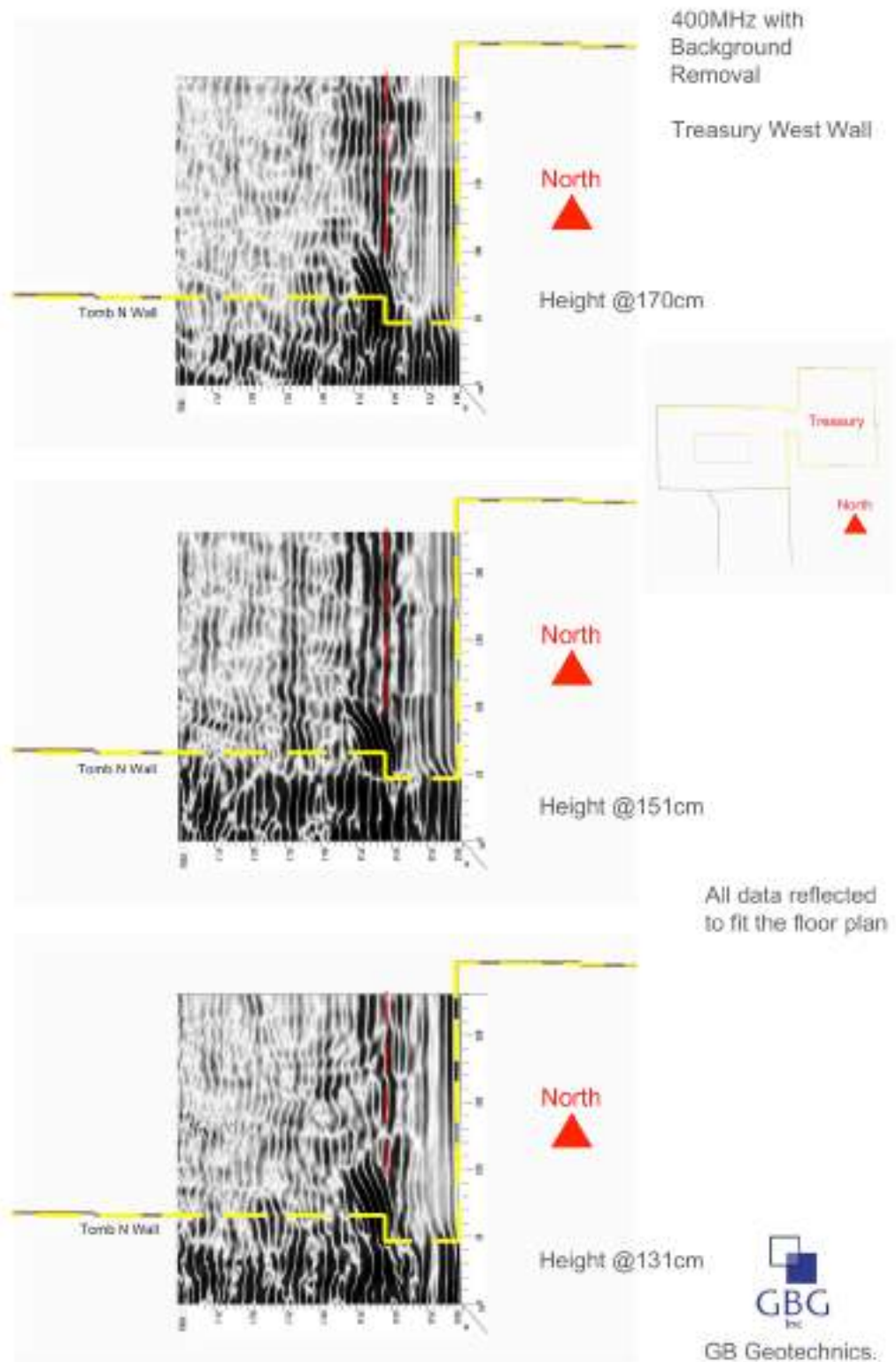


Fig. 36. Reprocessed GPR II readings from the Treasury (Ja), northern part of west wall  
 (Designation "Tomb" = Burial Chamber)  
 (George Ballard, copyright © George Ballard, GB Geotechnics)

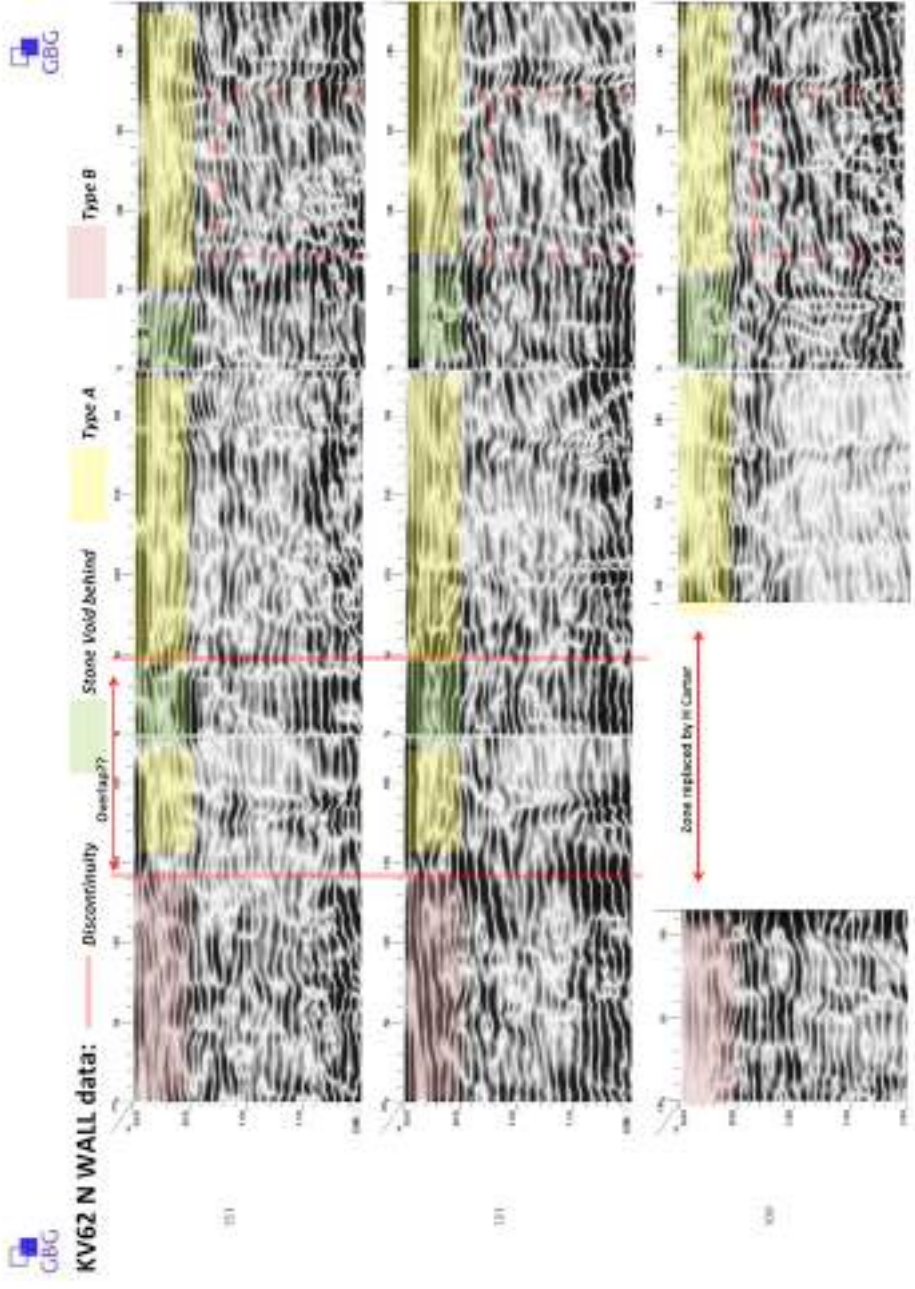


Fig. 37. Reprocessed GPR II readings from the Burial Chamber (I), north wall  
 (George Ballard, copyright © George Ballard, GB Geotechnics)



IMG\_4699.jpg



IMG\_4699.jpg



IMG\_4696.jpg



IMG\_4697.jpg

Fig. 38. Deep gouge marks/hand prints in thick plaster in the areas of the putative doorway of the west wall (above) and the speculated position of any fourth doorway which might exist within the south wall (below). See above, *The Burial of Nefertiti? Revised Addenda and Corrigenda to Reeves 2015a*, notes to page 5 and page 6, n. 45 (after Factum Arte 2009, copyright © Factum Arte)



Fig. 39. Burial Chamber (J), KV 62: north wall. (Above) Proposed outline of walled-up corridor continuation with its internal “service doorway”. (Below left) Enlarged photo taken in raking light of the wall surface above the first and second cups of incense: observe the clear line of demarcation between the softer, more muted plaster above the proposed line of the lintel and the harder, grittier, striated texture below. (Below right) Enlarged surface detail of the putative “service doorway” itself, showing the continuation of this hard, gritty, striated surface over the entire area. Though here muted by added layers of paint, it is identical to that found on the various door blockings encountered by Carter (see Fig. 40)

(above, Peter Gremse, ConceptZone Kommunikationsdesign, copyright © Peter Gremse; below, both Nicholas Reeves, copyright © Nicholas Reeves)



Fig. 40. Antechamber (I), KV 62: stamped plaster blocking to the “service doorway” giving access to the Burial Chamber (J) (Carter no. 28). Note hand gouges, linear sweeps and hard, gritty texture identical to those seen in Figs. 37 and 38

(Carter MSS, no. 028, Burton photograph p0283, detail, copyright © Griffith Institute, Oxford)





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- OP 2 Nicholas Reeves, *The Gold Throne from the Tomb of Tutankhamun (Carter Object No. 91)* (in press)
- OP 3 Nicholas Reeves, *The Decorated North Wall in the Tomb of Tutankhamun (KV 62) (The Burial of Nefertiti? II)*, with *A Review of the Geophysical Data* by George Ballard (2019)
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