2. See also Weeks, *Art*, 61.
8. Y. Harpur, *Decoration In Egyptian Tombs Of The Old Kingdom. Studies In Orientation And Scene Content* (London, 1987).
14. According to the eight thematic divisions established by Harpur, *Decoration*, 175. To the current literature however may be added several unpublished theses held by Macquarie University, for example R. Siebels, *Agriculture In Old Kingdom Tomb Decoration. An Analysis Of Scenes And Inscriptions* (Ph.D Dissertation, 2002); L. Kinney, *Dance, Dancers And The Performance Cohort In The Old Kingdom* (Ph.D Dissertation, 2004) published

15 Harpur, *Decoration*, 1 Note 2; 231.


42 See Kanawati, *Tomb And Beyond*, 73-74 who suggests that the decoration of a tomb may have been “carried out by a group of sculptors and/or painters under the supervision of a master artist…or was the work of one man”. See also N. Kanawati and A. Woods, *Artists In The Old Kingdom: Techniques And Achievements* (Cairo, 2009).


45 See also M. Hampson, ‘Experimenting With The New: Innovative Figure Types And Minor Features In Old Kingdom Workshop Scenes’ in *Egyptian Culture And Society* I, 165-180.


47 MFA, *Giza Archives*, Photo ID PDM-1999.012.14; A1035_NS; A1061_NS; A1061P_NS; A1062_NS; A5459_NS-A5463_NS; A5470_NS-A588_NS; A5517_NS; A6698_NS-A6699_NS; B1686_NS-B1689_NS; B2046_NS; B2058_NS-B2060; C5186_NS-C5187_NS. For most recent study see M. Hampson, ‘A Princely Find: The Lost Scenes Of Craftsmen In The Tomb Of Khuenre’ in *Ancient Memphis: ‘Enduring Is The Perfection.’ Proceedings Of The International Conference Held At Macquarie University, Sydney On August 14-15, 2008. Orientalia Lovaniensia Analecta* 214, L. Evans (ed.) (Leuven, 2011), 193-204.
Owing to their infrequent occurrence and hence limited scope for comparison, scenes of Textile Manufacture and Stone Engraving are not included in the present corpus. It is disputed moreover whether the latter in fact constitutes a ‘workshop activity’. See Eyre, ‘Work: Old Kingdom’, 32; H. Pittman, ‘Cylinder Seals And Scarabs In The Ancient Near East’ in Civilizations Of The Ancient Near East III, J. Sasson (ed.) (New York, 1995), 1593; W. Boochs, Siegel und Siegel in Alten Ägypten (Sankt Augustin, 1982), 104. For scenes of Textile Manufacture see the tombs of nhm-rc-HurJsj in A. Badawy, The Tomb Of Nyhetep-Ptah At Giza And The Tomb Of Ankhmhor At Saqqara (Berkeley, 1978), fig. 32; Ppjo-nh:Hnj-kn in A.M. Blackman and M.R. Apted, The Rock Tombs Of Meir V (London, 1953) pl. xv[3]; Nj-ksw-Jsjj in N. Kanawati, The Teti Cemetery At Saqqara VI (Warminster, 1996-2001), pl. 67[b]; Block PM546 in C.M. Firth and B. Gunn, Teti Pyramid Cemeteries I (Le Caire, 1926), 36. For scenes of Stone Engraving see the tombs of Tji in H. Wild, Le Tombeau de Ti III. La Chapelle (Le Caire, 1966), cxxiv; Tp-nh II in S. Hodjash and O. Berlev, The Egyptian Reliefs And Stelae In The Pushkin Museum Of Fine Arts Moscow (Leningrad, 1982), pl. 3; Hw-n-R in MFA, Giza Archives, Photo ID A5484 NS. Note also the omission of various scenes currently classified in the literature as pertaining to workshop activity but found to be erroneously identified. In summary these are as follows: (a) A scene in the tomb of Nfr-jry-n.f (D55 Saqqara) described as “craftsmen making beads” by R.S. Bianchi ‘Ancient Egyptian Reliefs, Statuary And Monumental Paintings’ in Civilizations IV, 2537 but on examination of the relevant photographs in B. van de Walle, Le chapelle funeraria de Neferirtenef (Bruxelles, 1978), 32, pl. 13 and E. Keyser ‘Scènes de chasse et de pêche’, CdE 22 (1947), 42, fig. 8 found to be a depiction of fish gutting. cf. Harpur, Decoration, 344, Plan 125; (b) A scene cited by PM III, 754 as containing the remains of “industries” but on personal inspection by kind permission of Cairo Museum, found to comprise only the chest of an individual, the title of whom is lost. By courtesy of MFA, Giza Archives, Photo ID A7094 NS but observed to be figures either reaping flax with sickles or taking objects out of a box as opposed to constructing it. See W.K Simpson, The Mastabas Of Kawab, Kha khuju I And II, G7110-20, 7130-40 And 7150 And Subsidiary Mastabas Of Street G7100. Giza Mastabas III (Boston, 1978), 24, pl. xxxvi[b]; (c) A scene in the tomb of Hwfw-hr of II (G7150 Giza) classified by MFA, Giza Archives under the search category “Industrial scene: Carpentry” but on examination of Photo ID A8182_NS seen to comprise two sets of figures either placing or taking linen out of a box, as first observed by G.A. Reisner in ‘A History Of The Giza Necropolis III. Unpublished 1942 Manuscript Appendix N: Cemetery G4000’, MFA, Giza Archives, G5210 01 and in G.A. Reisner, A History Of The Giza Necropolis I (Cambridge [Massachusetts], 1942-1955), 330[3]; (e) A scene in the tomb of nhm-rc-R (G7837+7843 Giza) also described as a scene of industry, specifically “Carpentry”, by MFA, Giza Archives, but when viewed in Photo ID A6151 NS found to be a representation of bed making not bed construction as implied. See Reisner, Giza I, 351; G.A. Reisner, ‘A History Of The Giza Necropolis III. Unpublished 1942 Manuscript Appendix P: Cemetery G7000 Part 2’, MFA, Giza Archives, 478; PM III, 206. Owing to their different context, scenes of workshop activity recorded in the burial chamber of the tomb of Kh(j)-m-5nh (G4561 Giza) also are not included in the corpus but may be viewed as relevant in terms of potential dating and stylistic criteria. They show in summary (a) Two scenes of Carpentry. See MFA, Giza Archives, Photo ID AEOS_II 2554; N. Kanawati, Tombs At Giza I. Kaimankh (G4561) And Seshemnefer I (G4940) (Warminster, 2001), pl. 15a upper and lower right. Identified by MFA, Giza
Archives as an “Industrial Scene: Shipbuilding” but given that a branch is shown being dressed, the scenes may be more appropriately classified as Carpentry, specifically the preparation of staffs. If so, the use of an axe for this procedure by the lower figure constitutes a unique interpretation, as would the feature of a branch being worked if the shipbuilding classification should prove correct. Described only as “craftsmen working with wood” by Kanawati, *Giza I*, 41. (b) A scene of Metalwork, specifically the heating of precious metal based on the depiction of a single metal blower. See Kanawati, *Giza I*, pl. 15a upper left. Not identified by the latter nor MFA, *Giza Archives* despite the figure clearly holding a blowpipe with tuyure and rhyton-shaped crucible being in evidence. In artistic terms, the crucible shape and the holding of the blowpipe at the top and middle are consistent with Kanawati’s date of late Dynasty V, possibly V.8, for the tomb in *Giza I*, 18, with both features on present evidence having a *terminus ante quem* of V.M-L and occurring most commonly in tombs dated V.8-VI.1. Note that other scenes identified by MFA, *Giza Archives* as pertaining to workshop activity have been incorrectly classified: Photo ID AEOS_2532_1/PDM 00955 identified as “Industrial Scene: Carpentry” when in fact depicting the preparing and making of a bed, indicated as such in the accompanying caption *wdt lw.t “laying out the bed”*. See Kanawati, *Giza I*, 33, pl. 32; N. Kanawati, ‘Decoration Of Burial Chambers, Sarcophagi And Coffins In The Old Kingdom’ in Studies In Honor Of Ali Radwan I, K. Daoud, S. Bedier and S. el-Fatah (eds.) (Cairo, 2005), 58; Photo ID AEOS_II_2555 also identified as an “Industrial Scene: Carpentry” but again showing the making of a bed. See Kanawati, *Giza I*, 38, pl. 35; Photo ID AEOS_II_2533_2 with the same identification “Industrial Scene: Carpentry” but more accurately described as “preparing furniture” by Kanawati, *Giza I*, 33 based on the caption present *wḥ st “fixing the chair”* which refers to the positioning or stacking of the chair on top of the accompanying bed frame, clearly visible as the intended action in pl. 32 of same.


58 Argued by E. Staehelein, Untersuchungen zur ägyptischen Tracht im Alten Reich (Berlin, 1966), 116-117 as intended exclusively for funerary purposes. See also Brovarski, ‘Beaded Collars’, 154.

59 [Cat.18.1.2H-2I] [Cat.24.2.2I] [Cat.24.2.22K] [Cat.24.2.2N-2P].

60 [Cat.45.1.A-1C] [Cat.15.4.1A-1D].


62 [Cat.40.1.3D] [Cat.41.1.2A-2B] [Cat.41.1.4D] [Cat.53.1.1G].

63 The context is assumed in the case of Msr-5nh III [Cat.4] on the basis of the estates held by her family. See D. Dunham and W.K. Simpson, The Mastaba Of Queen Mersyankh III G7530-7430. Giza Mastabas I (Boston, 1974), 8. In this regard see also the tomb of Sššt:Jdw [Cat.28].

64 Drenkhahn, Handwerker, 135; Montet, Scènes, 275; Faulkner, CD, 30; R. Hannig, Ägyptisches Wörterbuch I. Altes Reich und Erste Zwischenzeit (Mainz am Rhein, 2003), 217 [3793]. For occurrences see the tombs of Hw-n-R in MFA, Giza Archives, Photo ID A1035 NS; Nj-5nh-Hamw and Hnmw-htp in A. Moussa and H. Altenmüller, Das Grab des Nianchchnum und Chnumhotep (Mainz am Rhein, 1977), Taf. 65 and Jbj in N. de G. Davies, The Rock Tombs Of Deir el- Gebrawi I (London, 1902), pl. xv. Note distinction between Js.t “workshop” and Js.t “gang” although considered interchangeable by scholars such as K.R. Weeks, The Mastabas Of Cemetery G6000: G6010 (Neferbauptah, G6020 (Iymery) And G6040 (Shepseskafankh). Giza Mastabas V (Boston 1994), 18[32]. cf. Eyre, ‘Work: Old Kingdom’, 29 who defines Js as “place of work” but note his erroneous reading of Ms as “workshop” in the tomb of Jj-mrjj [Cat.1.1.1B].


67 For classification of wooden boat building as a workshop activity see Harpur, Decoration, 84; Drenkhahn, Handwerker, 97 Note 4; Reisner, Giza 1, 350; Eyre, ‘Work: Old Kingdom’, 27. cf. Kanawati, Tomb And Beyond, 72.

For exceptions see the tombs of Mr.s-ḥn III [Cat.4] and ẖn-m-“-Ḥr:Sṣj [Cat.18].


Drenkhahn, ‘Artists And Artisans’, 338; Junker, Künstler, 32; Eaton-Krauss, Statuary, 46; J.R. Harris, Egyptian Art (Feltham, 1968), 11 but see Drenkhahn, Handwerker, 97. Note 3.

For exceptions see the tombs of Wp-m-ምṛt:Wp [Cat.3] and Nb.j-m-ḥṭj [Cat.5], where Jewellery Making is separated from its usual association with scenes of Metalwork by two registers, and Ḫḥj [Cat.45] where Sculpture appears in the same register as Carpentry. Note however that this latter tomb is characterised by such illogical placement. See Harpur, Decoration, 121. Furthermore it is common for different materials, both wood and stone, to be worked in the same scene of Sculpture, although in the cases cited [Cat.3] [Cat.15] [Cat.33] proximity to either Carpentry and/or Stonework generally still applies. Contra. Eaton-Krauss, Statuary, 45 who sees placement as an unreliable criterion in the determination of medium.


Drenkhahn, Handwerker, 147; N. Strudwick, ‘Some Remarks On The Disposition Of Texts In Old Kingdom Tombs With Particular Reference To The False Door’, GM 77 (1984), 35 but see Eyre, ‘Work: Old Kingdom’, 26 for inscriptive evidence of distinction between tomb makers ḫṛṯ-ḥs and ḫṛṯ-ḥḥr and necropolis craftsmen. Note further his argument that wḥb.t may have referred only to an administrative organisation rather than a work centre. See ‘Work: Old Kingdom’, 28.

Strudwick, ‘Disposition Of Texts’, 35-36; Drenkhahn, Handwerker, 147 but note latter’s argument Handwerker, 148 that both types of workshops could have been housed in the same complex, the wḥb.t ṛṣj.t therefore referring to the southern wing.

So Eyre, ‘Work: Old Kingdom’, 27.

Eyre, ‘Work: Old Kingdom’, 27 and Scheel, Egyptian Metalworking, 59 also cite the personal craftsmen of the king himself (ḥswt) in this category but it is disputed by Drenkhahn, Handwerker, 145 that these craftsmen were permitted to engage in private service.

Note the argument of Bolshakov ‘Funeral Procession’, 46 Note 19 that funerary goods manufactured by wḥb.t craftsmen, particularly statues, were completed in their own workshops contra. Drenkhahn, Handwerker, 139 who proposes that such craftsmen functioned as ‘guest workers’ in the household of the deceased. cf. Eyre, ‘Work: Old Kingdom’, 28.

See Drenkhahn, Handwerker, 135ff.

For organisation of labour in the Old Kingdom see Malek, Old Kingdom, 102. cf. Eyre, ‘Work: Old Kingdom’, 28; Drenkhahn, Handwerker, 134; Drenkhahn, ‘Artists And Artisans’, 338.


It is possible that the poorly preserved caption associated with Jewellery Making in the tomb of Kḥ.j-rḥ [Cat.29.1.1D-1E] was written in the plural, thereby potentially increasing
the number of jewellers of the \textit{pr-d.t} depicted in the corpus to ten.

For example as companions to the tomb owner or as offering bearers or priests. See Eyre, ‘Work: Old Kingdom’, 30; Junker, \textit{Künstler}, 52ff.; Drenkhahn, \textit{Handwerker}, 66; 139. The term may also appear as a component of an individual’s title. See Drenkhahn, \textit{Handwerker}, 148-149.


Translated as “intimate” in general contexts. So D. Jones, \textit{An Index Of Ancient Egyptian Titles, Epithets And Phrases Of The Old Kingdom I} (Oxford, 2000), 449 [1680].


Drenkhahn, \textit{Handwerker}, 139.

Junker, \textit{Künstler}, 16. Note also the specific identification and naming of other craftsmen in at least 14 chapels, in contrast to the usual anonymity of minor figures, supporting the notion that many tomb owners formed close personal relationships with their workmen. See especially the chapel of \textit{Wp-m-nfrt:Wp} [Cat.3] where at least four craftsmen are named among the 15 witnesses to his will, in addition to those identified in the chapel’s workshop scenes and [Cat.1] [Cat.4] [Cat.11] [Cat.15] [Cat.18] [Cat.21] [Cat.22] [Cat.24] [Cat.36] [Cat.40] [Cat.44] [Cat.48] [Cat.49].


The tomb of \textit{K3,j-jrr} [Cat.29] remains unpublished at the time of writing hence his full title sequence cannot be confirmed, however the size of his tomb and the quality and originality of the relief work suggests he was an official of considerable importance and means.

See also Harpur, \textit{Decoration}, 121.

Kanawati, \textit{Tomb And Beyond}, 84.

Note Badawy’s incorrect identification of \textit{'nh-m-\textsuperscript{a}-Hr:Ssj} as \textit{mdh.w nswt “Royal Carpenter”} in \textit{‘Ankhma\textsuperscript{a}hor}, 14. The title is to be read \textit{mdh ss nswt “The Master Architect Of the King”}. Jones, \textit{Titles I}, 467[1739]; N. Kanawati and A. Hassan, \textit{The Teti Cemetery At Saqqara II: The Tomb Of Ankhmahor} (Sydney, 1997), 28. It is unclear the extent to which the title \textit{“Inspector Of The Boat”} held by \textit{Jntj} [Cat.40] cited by N. Kanawati and A. McFarlane, \textit{Deshasha:The Tombs Of Inti, Shedu And Others} (Sydney, 1993), 15 may have influenced the inclusion of wooden boat building scenes in his chapel, however the major titles associated with dockyard supervision \textit{eg.} \textit{jmj-r wab.t “Overseer Of The Dockyard/Workshop”} Jones, \textit{Titles I}, 105[426] and \textit{jrj wab.t “Keeper Of The Dockyard/Workshop”} Jones, \textit{Titles I}, 313[1149] are otherwise found to have no representation and hence no relevance to the corpus. For further discussion of officials known to be connected with boats see Galán, ‘Two Old Kingdom Officials’, 145ff.

Note that in the case of \textit{PtH-Spss} M. Verner, \textit{Abusir I. The Mastaba Of Ptahespes. Reliefs} (Prague, 1977), 125 translates \textit{jmj-r w\textsuperscript{b}.t} specifically for this individual as “Overseer Of The \textit{w\textsuperscript{b}.t Chamer}” i.e. the “embalming workshop” as does Jones, \textit{Titles I}, 87[370]. Note further in the case of \textit{Nfr and K3-h3:j}, the combining of their two titles \textit{sHd pr-\textsuperscript{3} and shd w\textsuperscript{b}.t} to read \textit{shd pr-\textsuperscript{3} w\textsuperscript{b}.t} by A. Moussa and H. Altenmüller, \textit{The Tomb Of Nefer And Ka-hay} (Mainz am Rhein,1971), 15 Note 28. But see N. Kanawati, \textit{The Egyptian Administration In The Old Kingdom. Evidence Of Its Economic Decline} (Warminster, 1977), 101[170].

Jones, \textit{Titles I}, 87[374].

97 Jones, *Titles* I, 133[524].


100 Note however that *Snmd-jb:MHj* [Cat.11] and *K3-gm-n.j:MMj* [Cat.31] are both *jmj-r pr.wy nbw*.

101 Brovarskij, *Senedjemib Complex* I, 159.

102 Note that Brovarskij, *Senedjemib Complex* I, 158 Note 291 incorrectly assigns the title *jmj-r w.b.t* to *Mrrw-k3:j:Mrj* [Cat.21]. For complete title sequence see N. Strudwick, *The Administration Of Egypt In The Old Kingdom* (London, 1985), 100.

103 Drenkhahn, *Handwerker*, 149.

104 Jones, *Titles* I, 391[1450].


106 Jones, *Titles* I, 180[681].


109 See Moussa and Altenmüller, *Nefer And Ka-hay*, 17.

110 These being at the time of writing *3ht-htp:HMj* (PM III², 627-629); *Jdw* I (PM III, 165); *Jmny* (PM III², 91-92); *snhw* (Not Recorded); *nh-hif:K3r* (PM III², 257-258); *Pth-htp* (PM III², 653-654); *Mrrj* (PM III², 607-608); *Nj-snh-3ht:Jtj* (PM III², 258); *Nfr-sšm-r*:Śšj (PM III², 511-512); *Nfr-sšm-sššt:Hnw* (PM III², 585-586); *Hnumw-ngj* (PM III², 87); *Sšbw-pth:Jbbj* (Not Recorded); *Tbw* (PM III², 537). See Strudwick, *Administration*, 55ff. Subject to revision in light of ongoing discoveries.

111 See the tombs of *Jdw* I (PM III²,165); *snh-jr-pth* (PM III²,138); *Rc-wr* (PM III², 265-269); *Sšbw:Jbbj* (PM III², 460-461); *Shm-sngh-pth* (PM III², 191). See Strudwick, *Administration*, 55ff.; Drenkhahn, *Handwerker*, 148.

112 For the 30 known holders of this title additional to the corpus at the time of writing see Strudwick, *Administration*, 55ff.; Kanawati, *Administration*, 81ff.

113 For the nine known holders of this title additional to the corpus at the time of writing see Kanawati, *Administration*, 81ff.


115 The East Wall of the chapel containing a scene of Jewellery Making is thought to be the area reserved for *Nfr*’s parents, *K3-h3:j* and *Mrjt-jt.s*. So Moussa and Altenmüller, *Nefer And Ka-hay*, 14.

116 As implied by Myśliwiec, *Merefnebef* I, 250.

117 The tomb of *K3,j-jrr* was unpublished at the time of writing, the only recorded titles to date being *h3tj-s* and *smr w’tj*. See K. Daoud, ‘The Tomb Of Kairer. Preliminary Report On The Field Work Season’, *GM* 147 (1995), 45 Note 7.

118 Excluding holders of the titles *jrj-p’t*, *h3tj-s* and *smr w’tj*, these being for much of the Old
Kingdom largely rank titles carrying prestige but entailing no functional duties. For holders of these titles in the corpus see [Cat.3] [Cat.5] [Cat.6] [Cat.10] [Cat.11] [Cat.12] [Cat.13] [Cat.15] [Cat.18] [Cat.19] [Cat.20] [Cat.21] [Cat.22] [Cat.25] [Cat.29] [Cat.31] [Cat.33] [Cat.41] [Cat.42] [Cat.45] [Cat.46] [Cat.48] [Cat.49] [Cat.50] [Cat.54] [Cat.55] and [Cat.56].

For issue of wealth and personal investment in tomb construction and decoration see also Kanawati, Administration, 39ff.; N. Strudwick, Texts From The Pyramid Age (Atlanta, 2005), 251-260; A. M. Roth, ‘The Practical Economics Of Tomb Building In The Old Kingdom. A Visit To The Necropolis In A Carrying Chair’ in For His Ka: Essays Offered In Memory Of Klaus Baer, D. Silverman (ed.) (Chicago, 1994), 227-240; N. Weeks, ‘Care Of Officials In The Egyptian Old Kingdom’, CdeE 53 (1983), 5-22.

For examples of named artists see Kanawati, Tomb And Beyond, 73.

See K. Baer, Rank And Title In The Old Kingdom (Chicago, 1960), 231.


Harpur, Decoration, 59ff.

Harpur, Decoration, 66.

With the kind permission of Dr. Zahi Hawass, Supreme Council Of Antiquities and supported by a Macquarie University Postgraduate Research Fund Grant awarded 2004, the tombs examined being [Cat.1] [Cat.4] [Cat.7] [Cat.10] [Cat.11] [Cat.18] [Cat.19] [Cat.21] [Cat.22] [Cat.24] [Cat.26] [Cat.28] [Cat.31] and [Cat.33].

The owners of the false door and statue niche respectively of [Cat.47] and [Cat.51] are unidentified. Although uninscribed, the relevant statue niche in [Cat.4] is identified by G.A. Reisner, ‘The Tomb Of Meresankh, A Great-Granddaughter Of Queen Hetep-Heres I And Sneferu’ , BMFA 25 (1927) No. 151, 70 as belonging to Mr.s-īnh III’s steward and chief funerary priest Hm-tn who supervised the making of the chapel. cf. Dunham and Simpson, Mersyankh III, 17; Smith, HESPOK, 44; PM III², 197[3].


Nibbi, ‘Cedar Again’, 43.


Kanawati, Administration, 154.

Smith, HESPOK, 209.

Harpur, Decoration, 271.
But see [Cat.4] for an example of this feature in a statue dragging scene and [Cat.26] for its use in a scene of browsing goats.


H. Brunner, *Die Anlagen der ägyptischen Felsgräber bis zum Mittleren Reich* (Glückstadt, 1936), 79.

A. el-Khouli and N. Kanawati, *The Old Kingdom Tombs Of el-Hammamiya* (Sydney, 1990), 16; 56.

M. Lane, ‘The Pull Saw In Ancient Egypt’, *AncEg* 1 (1935), 56. Contra. Killen, *Egyptian Woodworking*, 13 and *Egyptian Furniture* I, 20 who argues that the function of the weight was to separate the timber to allow free movement of the saw and to prevent the closing of the timber behind the fresh saw cut in a phenomenon known as ‘pinching’. His description of the weight being tied to the top of the timber is not supported in all cases where it is illustrated however, i.e. [Cat.8] [Cat.24] [Cat.41] [Cat.49], and in two examples it is positioned below the saw cut [Cat.8] [Cat.41].


It is not always possible on the basis of artistic representation alone to determine whether a mortice is being cut for the subsequent insertion of a tenon or a hole is being prepared for the lashing of ropes, given that both methods of hull construction, frequently in combination, are attested in the period under discussion. See Partridge, *Transport*, 54; Haldane, ‘Egyptian Boat Construction’, 74-75; P. Johnston, *The Sea Craft Of Prehistory* (London, 1980), 74; E. Marx, ‘Ancient Egyptian Woodworking’, *Antiquity* 20 (1946) No. 79, 130; Lucas and Harris, *Materials*, 452-453.

Partridge, *Transport*, 143.

Baud, *Famille I*, 71.


S. Clarke, ‘Nile Boats And Other Matters’, *AncEg* 2 (1920), 43.


The long-handled adze being used for planing and the short-handled variety for finer work. Vandier, *Manuel V*, 667.


Not included as an activity associated with wooden boat building by OEE, *Database*, 10.12.

Thought to be indicative of a river vessel or replica thereof. See Partridge, *Transport*, 46; E. Marx, ‘Egyptian Shipping’, *The Mariner’s Mirror* 33 (1947), 147. For magical symbolism

153 See [Cat.1] [Cat.3] [Cat.5] [Cat.8] [Cat.18] [Cat.19] [Cat.21] [Cat.24] [Cat.30] [Cat.32] [Cat.40] [Cat.41] [Cat.42] [Cat.44] [Cat.49]. The presentation of a carrying chair as separate pieces in [Cat.48] may also qualify in this regard although it is possible that the artist simply wished to illustrate the various components of the object unobstructed and from all points of view.


155 Lucas and Harris, Materials, 437.


157 Killen, Egyptian Woodworking, 14.

158 So Harpur, Decoration, 265; Baer, Rank And Title, 287; N. Cherpion, Mastabas et hypogées d’Ancien Empire:le probleme de la datation (Brussels, 1989), 227.


161 For use of bow drill in this operation see Hayes, Scepter, 288; Killen, Egyptian Furniture I, 21.

162 Contra. Cherpion, Mastabas, 228; M. Mogensen, Le mastaba égyptien de la Glyptothèque Ny Carlsberg (Copenhagen, 121), xii.

163 For interpretation see B. Dominicus, Gesti und Gabarden in Darstellungen des Alten und Mittleren Reiches (Heidelberg, 1994), 155.

164 As identified by Killen, Egyptian Furniture I, 18.

165 Note debate as to the order of preparations. See Klebs, Reliefs AR, 89; Drenkhahn, Handwerker, 113-114; A. Hassan, Stöcke und Stäbe im Pharaonischen Ägypten bis zum Ende des Neuen Reiches (Tübingen, 1978), 20-22; M. Verner, The Mastaba Of Ptahshepses (Prague, 1977), 61 Note 45. Given that the objective was to soften the wood through the absorption of steam to facilitate shaping, it is more logical to assume that the stick was dampened first, even if counter to the order depicted in the only known example to date in the tomb of %rf-kA.j [Cat.44.1.2A-2B].

166 Hassan, Stöcke und Stäbe, 23-24; Drenkhahn, Handwerker, 113-114; Klebs, Reliefs AR, 89; Montet, Scènes, 311-312. Note however that this interpretation is not accepted by all scholars, some of whom (e.g. N. de G. Davies, The Rock Tombs Of Sheikh Said (London, 1901), 13;
W.M.F Petrie and F. Griffith, *Deshasheh* (London, 1897), 10; Verner, *Ptahshepses*, 60 Note 40; 61) argue that the sticks are being pressed to remove surface irregularities and harden the points, as indicated by the accompanying captions. See [Cat.21] [Cat.33] [Cat.41]. A combination of both processes, i.e. shaping and pressing performed simultaneously, is also likely.

167 As determined through my replication of the operation using a simple wooden model, contrary to a downwards motion as frequently stated.


169 Assumed in the case of _Hw-n-Ra* [Cat.8] owing to degradation of the lower East Wall.


174 These being distinguished by the absence of drop beads on the latter and its trapezoidal segmentation. See Brovarski, ‘Beaded Collars’, 142.

175 See Andrews, *Egyptian Jewellery*, 37ff.; Lucas and Harris, *Materials*, 40ff. However G. Jequier, *Les frises d’objets des sarcophages du Moyen Empire* (Le Caire, 1921), 61 argues that only in exceptional cases was the _nbw_ collar likely to have been composed entirely of gold, as in general it is painted with multicoloured beads in both relief scenes and on hieroglyphs. All collars in the corpus, irrespective of designation, are confirmed as being multicoloured where paint is preserved, consistent with the finding that the vast majority of extant beaded collars or collar elements are of faience. See Brovarski, ‘Beaded Collars’, 156ff.


179 Contra. Andrews, *Egyptian Jewellery*, 70 who argues that the action was designed to shrink the stringing threads in order to tighten the beadwork, however the term _jfj.t_ [Cat.24] implies a cleansing action, as does the use of _rw(f)_ [Cat.47].

180 Other interpretations of the liquid as a dye, anti-oxidising treatment, perfumed oil or polish by Drenkhahn, *Handwerker*, 45; Moussa and Altenmüller, *Nianchchnum*, 137 and G. Andreu, *Egypt In The Age Of The Pyramids* (Ithaca, 1997), 69 respectively must be considered erroneous in light of their potential to damage or dull most varieties of beads.
Assumed in the case of Jntj [Cat.40], based on the evidence of weighing and polishing scenes at the far right of the register.

So Moussa and Altenmüller, Nianchchnum, 137.

Use of bone and hardwood tools are also attested. See Aldred, Jewels, 71.

Aldred, Jewels, 69; Scheel, Egyptian Metalworking, 38-40.

See range of suggested dates [Cat.18].

Thought to be water or urine. See Lucas and Harris, Materials, 34-35; Klebs, Reliefs AR, 95. An alternative method was to coat the hide with a tawing agent before leaving it to dry.

N. de G. Davies, The Tomb Of Rekh-Mi-Re (New York, 1943), pl. 53.

There is some disagreement as to the order in which the two processes would have taken place. See Lucas and Harris, Materials, 35; B. Leach, ‘Tanning Tests For Two Documents Written On Animal Skin’, JEA 81 (1995), 241-242; Drenkhahn, Handwerker, 11. The caption j(w)=s sndm.t(j) wrt in the tomb of ‘nh-m-s-Hr:Ssj [Cat.18] could imply that the tanning agent has already been applied prior to stretching.


For description and commentary see H. Junker, Weta und das Lederkunsthandwerk im Alten Reich (Wien, 1957), 22.


Davies, Rekh-Mi-Re, pl. 53.

Petrie and Griffith, Deshasheh, 4.

Included in the corpus, although independent of a workshop context and performed by non-related personnel. In only one example however is there any evidence of spatial separation of the weighing and metal processing scenes [Cat.18].


Note disputed identification of metal in such scenes with S.R.K. Glanville, ‘Weights And Balances In Ancient Egypt’, *Proc.Roy.Inst.Gr.Brit.* 29 (1935), 23 stating that precious metal, usually gold, is represented contra. K. Sethe, ‘Hitherto Unnoticed Evidence Regarding Copper Works Of Art Of The Oldest Period Of Egyptian History’, *JEA* 1 (1914), 234 Note 2 who argues that only ordinary metals such as copper are shown being weighed. Where captions are included, the material is identified simply as *bj3* [Cat.1] [Cat.21] [Cat.30], the translation of which remains uncertain. But see A. Nibbi, ‘Some Remarks On Copper’, *JARCE* 14 (1977), 61 who suggests that the material being weighed is not metal at all but ready-made blocks of additive used to remove impurities during the refining process known technically as “cupellation”.

Accompanying captions in the tombs of Mrrw-k3:j:Mrj [Cat.21] and K3:j-jrr [Cat.29] indicate the site of distribution as the royal storehouses under the supervision of a palace administrator. See also Scheel, *Egyptian Metalworking*, 14; 21; Eyre, ‘Work: Old Kingdom’, 13; Altenmüller, ‘Abwiegen von Metall’, 14; Glanville, ‘Weights And Balances’, 23; S. Singer ‘Some Early Goldwork’, *Endeavour* 13 (1954), 87. Andreu, *Egypt*, 68 however suggests that the metal was weighed upon delivery to the workshops on the estates, which a majority of corpus inscriptions appear to corroborate.

For later comparison with the completed vessel. Enforced as a means of controlling stock and preventing embezzlement of state resources. So Scheel, *Egyptian Metalworking*, 21.


Note that the term ‘smelting’, commonly used to describe this process, is a misnomer. Smelting refers to the separation of the crude metal from its ore. The scenes under discussion depict the liquification of the crude metal ingots prior to processing. See G.A. Wainwright, ‘Rekhmire’s Metal Workers’, *Man* 44 (1944), 98; Scheel, *Egyptian Metalworking*, 21; Garenne-Marot, ‘Le Travail du cuivre’, 87. R.F. Tylecote’s argument in *A History Of Metallurgy* (London, 1976), 17 that blowing with pipes would simply cause a localised temperature increase sufficient only for brazing or soldering appears to contradict other findings that a charcoal furnace fired by this method could achieve temperatures in excess of 1,000°C (1800°F), roughly equivalent to the melting point of both copper (1083°C) and gold (1063°C). See Lucas and Harris, *Materials*, 211; 230; Scheel, *Egyptian Metalworking*, 23; Andreu, *Egypt*, 68.

The procedure also resulted in the removal of impurities and blisters. So Hodges, *Technology*, 63.


Modern experiments having shown these to be the optimum areas for even combustion. See Bamberger, ‘Working Conditions’, 151-152; Nibbi, ‘Pot Bellows’, 77 Note 11. Reinforced by the frequent repetition of the phrase *wd(j) r tb.t=f* in numerous scenes. See [Cat.1] [Cat.3] [Cat.11] [Cat.18] [Cat.23] [Cat.47].

Note evidence of angled foot on the same East Wall of *Snḏm-jb:Mḥj*’s tomb but in the register below.
Harpur, *Decoration*, 274.


But note U. Zwicker, H. Greiner, K-H. Hofmann and M. Reithinger, ‘Smelting, Refining And Alloying Of Copper And Copper Alloys In Crucible Furnaces During Prehistoric Up To Roman Times’ in *Furnaces And Smelting*, 103 who suggest that the purpose of the action is to “whirl...ore powder (and smell) the concentration of sulphur dioxide gas to find out whether all the ore has been roasted”. The text cited however confirms that the action is related to the liquification process.


Davey, ‘Crucibles’, 146; Wainwright, ‘Rekhmire’s Metal Workers’, 97.


Garenne-Marot, ‘Le Travail du cuivre’, 95; Gunter, ‘Material Technology’, 1547; W.M.F. Petrie, *The Arts And Crafts Of Ancient Egypt* (Edinborough, 1909), 98. The suggestion put forward by Scheel, *Egyptian Metalworking*, 28 and Aldred, *Jewels*, 68 that flat-faced stones were also incorporated for smoothing is not supported by the pictorial evidence which shows with one exception [Cat.49.1.2F] the consistent use of round stones.

Known from archaeological contexts to have been made of wood, stone or metal. Romano, ‘Jewelry And Personal Arts’, 1616; Möller, *Metallkunst*, 17; Scheel, *Egyptian Metalworking*, 28. Contrary to Scheel, no distinction between anvil and supporting wooden block is evident in the depictions.

See G. K. Johnson, ‘An Experiment In Ancient Silver Vessel Manufacture’, *JANES* 8 (1976), 100 where it has been shown that the weight of the stone is the critical factor in the process and “not human force”.

Baer, *Rank And Title*, 290.


Kanawati and McFarlane, *Deshasha*, 19.

See Section 3.3.2.

As proposed by Brunner, *Felsgräber*, 38 and PM IV, 121.

For further examples of similar ‘processing’ see Note 153 above.


Hassan, ‘Excavations At Saqqara’, pl. xcvi.


In the latter case by means of a layer of gesso or other adhesive. See Andreu, *Egypt*, 68; James, ‘Gold Technology’, 38. The hammering of the metal directly onto the surface is also cited.


Harpur, *Decoration*, 291, Table 2.29.


Both Eaton-Krauss, *Statuary*, 33 and Robins, *Art*, 71 argue from evidence of extant statuary that nude statues were a common statue type, particularly during late Dynasty V and Dynasty VI, as corroborated by the current study, the latter interpreting the presentation as a symbol of rebirth. In a workshop context however and where other features are absent, as in [Cat.49], the classification of the statue as unfinished is more appropriate.


See discussion Eaton-Krauss, *Statuary*, 57. Proximity to the working of like materials such as stone vessels and carpentry items has been shown by the same author to be an unreliable criterion. See *Statuary*, 45.


For description of method see Robins, *Art*, 20; Davis, *Canonical Tradition*, 17; Malek, *Egyptian Art*, 144.


Kanawati, *Tomb And Beyond*, 72.


See also Drenkhahn, *Handwerker*, 70 for distinctions between different types of artists.


So Junker, *Künstler*, 27; PM III², 231[6].


Probably stones but see Sleeswyk, ‘Hand Cranking’, 28 who suggests that the weights were in fact dried gourds partly filled with sand for safer functioning.


So Hartenberg and Schmidt, ‘Egyptian Drill’, 164.

Hartenberg and Schmidt, ‘Egyptian Drill’, 165. Experiments conducted by the authors confirm that the drill was not a crank-driven device as might be suggested by the presence of a handle. cf. Sleeswyk, ‘Hand Cranking’, 28.

Argued as representing three separate weights however by Sleeswyk, ‘Hand Cranking’, 27. If correct then the number of weights must be relative to the unusual size of the drill.


el-Khouli, *Stone Vessels II*, 800; Stocks, ‘Stone Sarcophagus Manufacture’, 918. See same for additional use of leather laps and mud.

As documented by el-Khouli, *Stone Vessels II*, 801.

Note that Junker, *Künstler*, 27 inadvertedly assigns the workshop scenes under discussion to the tomb of Jj-mrjī’s father Špss-kīf-īnh (G6040). This tomb was in fact left unfinished and Špss-kīf-īnh’s cult subsequently included within the tomb of his son. Its decoration is limited to scenes of offering bearers, musicians and butchery. See M. Barta, ‘A Family Of Funerary Priests From G6000 Cemetery’, *ArOr* 65 (1997) No. 4, 393-394.

Note omission of Leatherwork and Stone Vessel Making scenes in Harpur’s original plan *Decoration*, Plan 135. The contents of Register 4 are described only as “masons and statuary”.

Traces of the plank and the left foot of the figure were recorded by C.R. Lepsius, *Denkmäler aus Aegypten und Aethiopien* II (Berlin, 1849-1859), 49b. Note similarity to wood being sawn in Register 2. Weeks, *Cemetery G6000*, 34 records that Reisner originally suggested the figure might be holding a saw however in his scene synopsis *Giza I*, 364 the figure is clearly identified as “man with board(?)”.

So Drenkhahn, *Handwerker*, 100; Klebs, *Reliefs AR*, 88. Note that as recorded by LD II. 49b, the chisel has penetrated the base of the frame.

Not observed by Reisner, *Giza I*, 364. Abrasive omitted by LD II.49b. Incorrectly identified as hält Schlegel or “holding a mallet” by Drenkhahn, *Handwerker*, 98[II.4]. Examination of the scene in situ confirms that abrasive in the form of dark painted granuals is present, as copied by Weeks, *Cemetery G6000*, fig. 30.


Given that the accompanying inscription *shd js hm-k3* was painted and not carved, it is likely to be a later addition, indicating the subsequent promotion of the individual shown. Title omitted by LD II.49b; J-F. Champollion, *Monuments de l’Égypte et de la Nubie IV*. 473
Simulated granite appearance omitted by LD II.49b and Champollion, Monuments IV, ccccxii[1].

Note omission of tying ropes LD II.49b.

Contra. Drenkhahn, Handwerker, 119 who describes the action as the carving of a block of wood, however the object conforms in shape to a box or chest of the h3-ht variety, as described by E. Brovarski, ‘Inventory Offering Lists And The Nomenclature For Boxes And Chests In The Old Kingdom’ in Gold Of Praise. Studies On Ancient Egypt In Honour Of Edward F. Wente, E. Teeter and J. Larson (eds.) (Chicago, 1999), 38-39 and a darker coloured strip on the right, possibly representing the edge trim, is visible in situ.

Not recognised as such by Barta, ‘Funerary Priests’, 392; Reisner, Giza I, 364; Weeks, Cemetery G6000, 35, the latter describing it as “two pieces of furniture or perhaps more of unidentifiable purpose”. But note parallel being worked by [Cat.26.2.4F].

So Drenkhahn, Handwerker, 107[1.1]. Contra. Klebs, Reliefs AR, 88; Barta, ‘Funerary Priests’, 392 and Weeks, Cemetery G6000, 35 who interpret the object as either a box or table. Note however that in situ the object appears solid in nature and there is evidence of a rectangular projection at the top left corner consistent with a bolt. The identification of a door is considered contextually more accurate, given the action of [Cat.1.1.2C] and the depiction of a door look in the same register, and helps to explain its apparent association with msdr “ears” (i.e. door leaves?) in the accompanying caption. For translation of caption see Weeks, Cemetery G6000, 35. cf. Hanning, Wb I. 569[16396]; Montet, Scènes, 303.


For parallels see Brovarski, ‘Inventory Offering Lists’, 31, fig. 4.3.

Note discrepancy in the copying of the upper hand of [Cat.1.1.3F] by Weeks, Cemetery G6000, fig. 30; Champollion, Monuments IV, pl. cccxi[2] and LD II.49b, the latter illustrating it incorrectly as clenched.

Drawn erroneously as individual pieces by Champollion, Monuments IV, cccxi[2]. Note additional discrepancy LD II.49b viz. apparent absence of hammer stones although clearly visible in situ. Note further error in Champollion, Monuments IV, cccxi[2] re. posture of [Cat.1.1.3J] who is depicted facing the opposite direction as a result of the copyist inadvertently confusing the outline of the figure’s lower body with the right knee of [Cat.1.1.3I].

The paint palette is obscured however the position of the left arm and hand is indicative of one being present. Contra. Eaton-Krauss, Statuary, 115 who states that the hand “simply touches the walking staff held by the statue”. Hypothetical reconstruction of the scene suggests that it is the upper body of the statue which is being painted and not the face as further proposed by same.

Drenkhahn, Handwerker, 73[II] and with reservation Reisner, Giza I, 365 and Eaton-Krauss, Statuary, 46. Contra. Weeks, Cemetery G6000, 36 who describes the activity as dealing “either with the manufacture or the filling of ceramic vessels”. The depiction of completed stone vessels in the sub-register above however confirms the identification.

Suggested by the depiction of a sack over the shoulder, most likely filled with tanning agent, and a lump of the same material held in the right hand but note incorrect description of lump as a “cup” by Weeks, Cemetery G6000, 36. Note that Hasanien, ‘Leather Manufacture’, 76; Eyre, ‘Work: Old Kingdom’, 32 and Barta, ‘Funerary Priests’, 392 do not classify this figure as a leather worker, the latter identifying him instead as a “vendor with....shopping bag” based on a purported likeness to figures of this kind in extant market scenes, for example in the tombs of Tjù inWild, Tombeau de Ti III, pl. clxxiv; Nj-‘nh-Hmnrw and Hmnwr-htp in Moussa and Altenmüller, Nianchchnum, Abb. 10; Tomb S920 in Y. Harpur, ‘The
Identity And Position Of Relief Fragments In Museums And Private Collections’, *SAK* 13 (1986), fig. 4 and *Ftk-tj* in M. Barta, ‘Die Tauschhandelszene aus dem Grab Fetekty In Abusir’, *SAK* 26 (1998), Abb. 1; B. Vachala, *Abusir VIII. Die Relief-fragmente aus der Mastaba des Ptahschêpses in Abusir* (Oxford, 2004), 193, Fragment C170. In such scenes however vendor figures are never shown in isolation as is the case with [Cat.1.1.4D] and they generally exchange one type of product for another. The figure is therefore correctly interpreted as a leather worker. Note Drenkhahn’s suggestion *Handwerker*, 11 that the term *s(j)n.t* refers to the material being held not the action.

299 Contra. Champollion, *Monuments* IV, cccxi[2] who depicts the figure smoothing or scraping the leather with stones. Although known to have been a preparatory step in leather manufacture, as cited by Lucas and Harris, *Materials*, 35 and A. Neuberger, *The Technical Arts And Sciences Of The Ancients* (New York, 1969), 78 and illustrated in the tomb of *Ppjj-* in M. Barta, *Die Tauschhandelszene aus dem Grab Fetekty In Abusir*, *SAK* 26 (1998), Abb. 1; B. Vachala, *Abusir VIII. Die Relief-fragmente aus der Mastaba des Ptahschêpses in Abusir* (Oxford, 2004), 193, Fragment C170. In such scenes however vendor figures are never shown in isolation as is the case with [Cat.1.1.4D] and they generally exchange one type of product for another. The figure is therefore correctly interpreted as a leather worker. Note Drenkhahn’s suggestion *Handwerker*, 11 that the term *s(j)n.t* refers to the material being held not the action.

300 Note that MFA, *Giza Archives*, ‘Photos: Sculpture’ questions whether G7710 and LG71 are the same tomb. Comparison of Reisner’s plan of LG71 in *Giza* I, 235 fig. 139 (Plan) with photographs of G7710 taken *in situ* by Peter Der Manuelian in MFA, *Giza Archives*, Photo IDs. PDM_00493, PDM_00494 and PDM_00495 confirms that they are.

301 Deduced from MFA, *Giza Archives*, Photo IDs. PDM 00494-00498 and 00501-00506 which show Rooms II and III to be the only areas containing the remains of decoration or draught decoration. The suggested location of the East Wall is based both on the typical wall position of workshop scenes in Memphite cruciform chapels (see Table 2.4.1) and traces of figures visible in the upper right corner when viewed under magnification (see MFA, *Giza Archives*, Photo ID. PDM 00506). Furthermore, the original find spot of the fragment in the court area directly behind the East Wall gives rise to the possibility that it fell there when the wall was partially destroyed. A second block found in the vicinity depicts a scene of butchery. See MFA, *Giza Archives*, Photo ID. B9160_NS (left).

302 For parallel see tomb of *Ppjj-* in M. Barta, *Die Tauschhandelszene aus dem Grab Fetekty In Abusir*, *SAK* 26 (1998), Abb. 1; B. Vachala, *Abusir VIII. Die Relief-fragmente aus der Mastaba des Ptahschêpses in Abusir* (Oxford, 2004), 193, Fragment C170. In such scenes however vendor figures are never shown in isolation as is the case with [Cat.1.1.4D] and they generally exchange one type of product for another. The figure is therefore correctly interpreted as a leather worker. Note Drenkhahn’s suggestion *Handwerker*, 11 that the term *s(j)n.t* refers to the material being held not the action.

303 Note that the workshop scenes are located in the Offering Room belonging to *Jbj*, the eldest son of *Wp-m-nfrt:* which appears to have been a later addition to the tomb. See Baer, *Rank And Title*, 66.

304 The accompanying inscription suggests that the metal is to be beaten a second time, the term *psj* being synonymous with annealing. See Jungst, ‘Metallarbeiterzonen’, 16; Hannig, *Wb* I. 475[11285]. cf. [Cat.33].

305 Contra. Junker, *Künstler*, 27 who describes the sarcophagus as being made of stone, however for classification as Carpentry see Drenkhahn, *Handwerker*, 104.


Contra. Hassan, *Giza II*, 196 and Dasen, *Dwarfs*, 256 who describe the action as “pulling”.

The presence of a box implies the additional responsibility of collecting and storing the completed collar. See Hassan, *Giza II*, 44.

PM III², 197[3] considers the scenes on the lower part of this wall, including Plate 2 on the extreme right, to be a continuation of the workshop scenes on the East Wall, as does Reisner, *Giza I*, 351.


Dunham and Simpson, *Mersyankh III*, 12; PM III², 197[2]; Reisner, *Giza I*, 351; Smith, *HESPOK*, 358. The material could therefore be either stone or wood as argued by Kanawati, *Tomb And Beyond*, 58 but the use of an adze and the activities of the adjacent craftsmen are suggestive of the latter. See Eaton-Krauss, *Statuary*, 48.

Identified as a “coffin” by Reisner, *Giza I*, 351 or “shrine” PM III², 197[2] but note parallel being worked by [Cat.3.1.3C-3D]. For further see H.G. Fischer, ‘Egyptian Doors, Inside And Out’ in *Egyptian Studies III. Varia Nova. MMA Series* (New York, 1996), 91.

The position of the arms is consistent with this action. Note traces of an adze handle and possibly the head here and in Dunham and Simpson, *Mersyankh III*, pl. iii[b] with some evidence remaining in situ. Omitted from scene synopsis by Reisner, *Giza I*, 350.

The usual context for the manufacture of sarcophagi is Carpentry, hence its classification as such here. See [Cat.1] [Cat.3] [Cat.8] [Cat.26] [Cat.44]. However red and black stippling in the preserved paint could indicate that, as a royal sarcophagus, this example is made of stone, probably granite, in which case the action would be one of polishing. See Dunham and Simpson, *Mersyankh III*, 12; Drenkhahn, *Handwerker*, 104 Note 21.

Note apparent copyist error re. placement of the left arm. Traces of raised relief visible in Reisner, ‘Meresankh’, fig. 12 and Dunham and Simpson, *Mersyankh III*, pl. iii[b] indicate that the arm should be positioned across the figure’s right shoulder not the chest. The remains of an adze are also discernable behind the head.

Suggested by traces of a curved line to the right of the box indicating the presence of an additional object. Action described as either “making or covering with gold” by Reisner, *Giza I*, 351 but an adze is able to be discerned in the hand of the figure in Dunham and Simpson, *Mersyankh III*, pl. iii[b] and in situ.

The raised inner arm of [Cat.4.1.3H] appears indicative of this action. See [Cat.5.1.5B].

Note that the scene was omitted from Drenkhahn’s corpus in *Handwerker*, 18ff.

So Scheel, *Egyptian Metalworking*, 9. Contra. Dunham and Simpson, *Mersyankh III*, 12 who describe the action as “pouring molten metal from a crucible”. Note however the omission in their line drawing of the anvil and the metal in the figure’s left hand, both of which are clearly visible in situ, and their misinterpretation of the hammer stone in

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the right hand as a crucible. The seated posture and position of the hands are in any case uncharacteristic for the process they describe. See [Cat.3.1.1E] [Cat.21.1.5I] [Cat.33.2.1F] [Cat.49.1.2D].

The possibility cannot be excluded that a scene of Boat Building was also depicted in this tomb, in association with that of browsing goats located above the doorway in Room I. See PM III², 230[2]; S. Hassan, *Excavations At Giza IV* (Cairo, 1930), fig. 75; Harpur, *Decoration*, 110. The sequence of browsing goats, felling trees and building boats is attested elsewhere in the corpus, e.g. [Cat.12] [Cat.24] [Cat.26] [Cat.42] [Cat.43], where the positioning of the scene above the doorway is occasionally evident. The area in question is sufficient to contain such a sequence, however no traces of the latter activities remain.

Although recovered amongst fragments belonging to the North Wall of Room II, Hassan assigned fig. 100 to the East Wall in *Giza IV*, 148[18] where he suggested that it formed part of the Metalwork scene, specifically the melting vignette in Register 4, bringing the total number of figures to six. Cf. Wainwright, ‘Rekhmire’s Metal Workers’, 95 Note 5. Reconstruction of the composition confirms the position of the fragment as assigned.

Junker, *Künstler*, 27; PM III², 231[6]. Note discrepancy between Hassan, *Giza IV*, fig. 81 and LD II.13 re. depiction of brush. The latter renders the hands of the figure as empty, whereas a tool is clearly observed being held in the Hassan facsimile. The posture is more indicative of painting than “inscribing” however as he suggests. See *Giza IV*, 42. Note that Drenkhahn, *Handwerker*, 102[1.1] incorrectly identifies the figure as simply “gesticulating” towards the shrine and that Klebs, *Reliefs AR*, 95 Note 2 misinterprets the activities in this register as Leatherwork, specifically *aushängen oder bringen des Leders* or “hanging out or bringing leather” in relation to the figure in question.

The posture of the figure is consistent with this action and minute traces of a hand holding a tool above the head are able to be discerned in LD II.13 but with incorrect rendering of the left hand. Alternatively a tall, narrow object such as a ‘bή’-sceptre or similar is being worked. The restricted space inhibits the trimming of an item of furniture.

The presence of the low backrest is indicative of a chair or couch. So Hassan, *Giza IV*, 142; E. Brovarski, ‘An Inventory List From ‘Covington’s Tomb’ And Nomenclature For Furniture In The Old Kingdom’ in *Studies In Honour Of William Kelly Simpson I*, P. Der Manuelian (ed.) (Boston, 1996), 144.

Note that the mallet held by [Cat.5.1.3D] appears to have been drawn or copied upside down. The distance between the figure and the statue precludes polishing.

So Drenkhahn, *Handwerker*, 18[1.4-8]; Scheel, ‘Metallhandwerk’, 123. The angle of the right arm suggests a pouring action and would logically be expected in this position consistent with the sequence.

So Drenkhahn, *Handwerker*, 18[1.4.9-12]. Contra. Hassan, *Giza IV*, 142; Reisner, *Giza I*, 351; Scheel, ‘Metallhandwerk’, 123[2]; OEE, *Database*, 10.15.10[3] who describe the action as beating sheet metal however note what appears to be the tang of the blade held by [Cat.5.1.4K].

So Drenkhahn, *Handwerker*, 18[1.5.1-2]. For parallel see [Cat.8.1.4H]. Contra. Scheel, ‘Metallhandwerk’, 123[2] who describes the figure as holding a piece of sheet metal. Drenkhahn specifies whether [Cat.5.1.5B] may also be beating a vessel however the posture is inconsistent with this action and there is no evidence of the requisite hammer stone.

Contra. Drenkhahn, *Handwerker*, 33 who describes the figure as *herausgeschnitten* or “cutting out”. However, no traces of a tool are evident in the depiction and the position of the inner arm is more consistent with pressing. See [Cat.4.1.3G-3H]. Note further that the figure is elevated off the baseline, suggesting that he is squatting on the platform attached to the chair.
Note discrepancy Hassan, *Giza IV*, fig. 81 where the figure is shown beating a basin on an anvil.

So Drenkhahn, *Handwerker*, 18[1.5.4-5]; Scheel, ‘Metallhandwerk’, 123[2]; Glanville, ‘Weights And Balances’, 23. Contra. Klebs, *Reliefs AR*, 84; OEE, *Database*, 10.5.1[3] and Hassan, *Giza IV*, 142 who describe the action as weighing crude metal. Note however that the latter’s interpretation is based on a less detailed recording of the scene owing to deterioration of the wall. The outline of the basin is clearly evident in LD II.13 and is identified as such by H. von Balcz, ‘Die Gefäßdarstellungen des alten Reiches’, *MDAIK* 3 (1932), 110, Abb. 24[c].

H. Junker, the original excavator of G4000 found a number of fragmentary reliefs at the entrance doorway to the mastaba. See *Giza I. Die Mastabas der IV. Dynastie auf dem Westfriedhof* (Wien and Leipzig, 1941), 145. He believed the southern end of the corridor, including the entrance, to be the only section of the chapel which was decorated. The additional fragments discovered by Reisner southeast of the mastaba, one of which was Plate 1, are therefore tentatively assigned to the same location. cf. P. Der Manuelian, ‘Hemiunu, Pehenptah And German/American Collaboration At The Giza Necropolis’ in *Zur Zierde gereicht. Festschrift Bettina Schmitz zum 60. Geburtstag am 24.Juli 2008*, A. von Spiekermann (ed.) (Hildesheim, 2008), 31.

As identified by Reisner, *Giza I*, 322 Note 1 and Smith, ‘Old Kingdom Reliefs’, 527 but see W.S. Smith, *The Art And Architecture Of Ancient Egypt*, revised by W.K. Simpson (Yale, 1998), 60 where it is described as “a representation of carpentry”. Note that Der Manuelian, ‘Hemiunu’, 36 classifies the scene in error as depicting a “a hand holding a staff” despite the object clearly exhibiting a short handle and straight narrow blade with bevelled edge, consistent with an adze drawn in profile view.

Smith, ‘Old Kingdom Reliefs’, 527 was undecided whether the line at the base of the fragment formed part of a knee or a shoulder. Hypothetical reconstruction of the figure indicates that in order to maintain correct anatomical proportion, given that the adze is held in the right hand, the line cannot represent the shoulder and is therefore in all probability a knee, the posture being consistent with that of a boat builder shaping the hull from underneath. See [Cat.33.1.2S] [Cat.33.1.3F] for closest parallels. Note that additional traces of relief, possibly representing a prop, were omitted by Smith, ‘Old Kingdom Reliefs’, fig. 14 No. 25-12-301 but are visible in the original photograph of the fragment. This raises doubts re. the identification of the scene as a boat builder working inside a boat’s hull by OEE, *Database*, 10.12.6[1].

Note omission of Sculpture and Carpentry in PM III² scene synopsis, the composition being described only as “four registers of offering bringers, cooks and jewellers”.

Note omission of Carpentry in Harpur’s scene summary, *Decoration*, 97.

Assuming that Simpson, *Kawab*, 26 is correct in his identification of the figure as a craftsman, the objects held would represent a staff and plumb, minute traces of which are possibly to be detected in situ. The action of “....leading or pulling on an object” as he suggests however is to date unattested in a workshop context.

It is possible that the remains of an adze handle are illustrated above and below the figure’s left hand, however the posture is more consistent with polishing. See [Cat.33.2.3J]. The identification proposed, i.e. a sceptre, is in keeping with Simpson’s description of the object as being “tall” in *Kawab*, 26 and with the singular exception of an oar, is the only representation which could be accommodated in the restricted space while still corresponding to the traces recorded. The translation suggested is based on what appears to be the hieroglyph \( \frac{1}{2} s \), however severe deterioration of the wall surface prevents confirmation of any traces of the remaining signs \(-\) in situ.

Note that only two of these photographs have been published previously in part in Smith, *HESPOK*, pl. 49b and Eaton-Krauss, *Statuary*, pl. xxvii. For scene synopses see Reisner.
Note omission of possible Jewellery Making and Seal Making, Leatherwork and an additional scene of Carpentry in Harpur’s original plan of the East Wall in Decoration, Plan 41 although referred to in part by Reisner, Giza I, 351 in his scene synopsis viz. “workmen making sandals...engraved seals” and implied by Smith, HESPOK, 169 in his description of a craftsman working on “gold ornaments”. Note also that Staff Making has been incorrectly identified as “rope making” both here and in Decoration, 181.

The position of the left hand may indicate the additional role of applying counter pressure to the hull or monitoring the compression of the bow as the trussing proceeds.

The posture and facial expression of the figure indicates that upward pressure is also being applied to the hull, most likely to facilitate easier tightening of the truss. For comparison with papyrus boat building see Landström, Ships, 97; A. Servin, ‘Constructions navales égyptiennes les Barques de Papyrus’, ASAE 48 (1948), 61.

Not observed by OEE, Database, 10.10.6.

Eaton-Krauss, Statuary, 112 Note 612 was undecided whether a paint palette was depicted in the figure’s left hand. Computer enlargement of MFA, Giza Archives, Photo ID A5479_NS confirms that an object with this appearance is present. See [Cat.18.1.2L].

Described in error as “false doors for the tomb” by Smith, HESPOK, 169.

Scene identified incorrectly as “rope making” by PM III², 294[1]; Reisner, Giza I, 351; Harpur, Decoration, 181. Note erroneous interpretation of the action illustrated as écorcer or “peeling” by Montet, Scènes, 313.

Drenkhahn, Handwerker, 113 and Hassan, Stöcke und Stäbe, 24 argue that the subsequent purpose of the sticks being shaped is undefined and insignificant, however it is clear from the inscriptions which accompany a majority of scenes in the corpus and from the depictions themselves that the finished products are to be understood specifically as staffs. In this regard see particularly [Cat.21.1.2D-2E] and [Cat.33.2.4A-4B] where the distinction is directly expressed.

My sincere thanks to Dr. Yvonne Harpur, Oxford University who concurred with this identification. Personal communication.

Reisner, Giza I, 351; Smith, HESPOK, 169. Scheel’s conclusion in Egyptian Metalworking, 10 that the first scenes of metalworking in the Old Kingdom are to be found in the tomb of Mrs.-nh III consequently must be rejected.

Based on parallel scenes in [Cat.24.2.2F-2G] and [Cat.47.1.1E-1F], however identified as “workers smelting unrefined or refined metal using blow pipes” by OEE, Database, 10.5.3[6] in the absence of an accurate recording.

Although the manufacture of jewellery, as typically represented, is absent from the scene, it cannot be excluded that such a depiction once existed in the now obliterated lower sub-register. The close proximity of the scene to those of Metalwork, together with the presence of jewellery boxes, jewellery pieces and a dwarf, are strongly suggestive of a Jewellery Making context. See Dasen, Dwarf’s, 118-119; W. Dawson, ‘Pygmies And Dwarfs In Ancient Egypt’, JEA 24 (1938), 187; Andrews, Egyptian Jewellery, 68; E. Thompson, ‘Dwarfs In The Old Kingdom’, BACE 2 (1991), 93.

Identified as “rope making” by Eaton-Krauss, Statuary, 111 Note 610, based on an apparent resemblance between the object held by the figure and a fishing net (see Gardiner’s Sign List T24). Computer enlargement of MFA, Giza Archives, Photo ID A1062_NS however shows the object to be a beaded collar with terminals and tying string clearly visible. For scene parallels see [Cat.40.1.3H] [Cat.44.1.1D]. Note that the recovery of this example calls into question the conclusion of P. Naster, ‘Die Zwerge als Arbeiterklasse in bestimmten...
Based on a parallel described by Neuberger, *Technical Arts And Sciences*, 79 as “pummelling a leather sole”. The identification of the activity as “completing the manufacture of leather sandals” in OEE, *Database*, 10.4.4[1] is consistent with this procedure.

This is the usual context for the manufacture of headrests. See [Cat.24] [Cat.32] [Cat.33] [Cat.41] [Cat.54]. Royal examples however are frequently attested in ivory and stone. The juxtaposition of the scene with Seal Making could indicate the working of like materials according to Pittman, ‘Cylinder Seals’, 1593, however Reisner, *Giza* I, 351 clearly identifies the object as “wooden”.

Described in error by Brovarski, ‘Inventory List’, 149 as having “passed out of fashion after Dyn. 3”. Omitted by OEE, *Database*, 10.1.11.

Contra. Reisner, *Giza* I, 351 who describes the larger object as a chair but note what appears to be a mattress indicating a made bed.

Not observed by Reisner, *Giza* I, 351. Action misidentified as “making a bed” by OEE, *Database*, 10.1.4[4].

Again not observed by Reisner, *Giza* I, 351 who describes this section of the register as “obliterated”. Omitted by OEE, *Database*, 10.1.32.

Neither PM III², 164 nor C.R. Lepsius, *Denkmäler aus Aegypten und Aethiopien Text* I (Leipzig, 1913), 58-59 identifies the exact location of the scene in Room IV. However given that the bottom register appears to be intact and that it is described by Eaton-Krauss, *Statuary*, 123 as comprising “the lower half of one wall”, the East Wall is suggested as the most logical position. The West Wall is precluded on the basis that it contains the false door stela as noted by Reisner, *Giza* I, 265 and the corresponding North/South walls appear to be too long. See plan and Reisner, *Giza* I, 264-265 for relevant measurements.

The tool employed by the figure has been poorly copied by Lepsius’ draughtsmen leading Eaton-Krauss, *Statuary*, 124 to identify it either as an axe or an adze. While the action of ndr can be associated with both of these tools (see Drenkhahn, *Handwerker*, 119; Montet, *Scènes*, 302-303), the posture of the figure i.e. seated using a one-handed operation is generally indicative of the latter. See [Cat. 30.1.1N] [Cat.33.2.3G] [Cat.43.1.1C].

Note that the scene of Sculpture in Register 4 has been omitted from the synopsis on account of Lepsius’ incomplete recording. See Eaton-Krauss, *Statuary*, 120 Note 645. Note same omission by H. Junker, *Giza III. Die Mastabas der vorgeschrittenen V.Dynastie auf dem Westfriedhof* (Wien and Leipzig, 1938), 43.

Note that Brovarski, *Senedjemib Complex I*, fig. 45 was able to observe additional details in Registers 3-5, including inscriptions which were poorly recorded or overlooked by Lepsius.

Note that Brovarski, *Senedjemib Complex I*, 52 identifies this as Register 2 with Register 1 being destroyed, contrary to an earlier description of the North Wall as comprising “five registers of craftsmen at work”. The surviving figures in fact constitute the lower left half of what was originally Register 1. Neither register remains in situ.

So Brovarski, *Senedjemib Complex I*, 52. Note however that part of the register is described as possibly depicting the “adding (of) finishing touches to another item of funerary equipment”. The symmetrical arrangement of the figures as depicted here is most commonly observed in scenes of Jewellery Making or Metalwork, e.g. [Cat.15] [Cat.21] [Cat.49], although the absence of either a work table or anvil is problematic. The fact that this presentation is unattested in scenes of statue making must therefore raise doubts about
Brovarski's interpretation of the activity as Sculpture.

Not observed by Drenkhahn, *Handwerker*, 115. Identified as a "sawer" by Brovarski *Senedjemib Complex* I, 53 but traces of lines near the figure's inner thigh and hip more likely represent the remains of binding rope looped in the workman's hands. See [Cat.51.1.3B-3C]. Furthermore, the bent arm position is associated with the sawing action only when the inner hand is on the blade.

See [Cat.1.1.1D]. The action is otherwise unattested. Identified by OEE, *Database*, 10.1.34[1] as a workman "sharpening a tool" but in all other documented examples this is performed as an independent procedure and is not associated with the working of a specific object as is the case here. cf. Brovarski, *Senedjemib Complex* I, 52. In view of this, the caption, if "p( )" is taken to represent "nt with draughtsman's error as argued by Montet, *Scènes*, 302, is not to be understood literally but refers rather to the action of scraping a stone against the tool to produce the abrasive.

Omitted by OEE, *Database*, 10.1.2. Described as "rough dressing a log with axes" by Brovarski, *Senedjemib Complex* I, 53 however the position of the left hand is indicative of a chisel being held. See [Cat.1.1.2B].

The one-handed operation of the tool indicates that it is a short-handled adze, traces of which are visible in the original HU-MFA expedition photograph published in Brovarski, *Senedjemib Complex* I, pl. 27b, although described by him as an "axe" in *Senedjemib Complex* I, 53. Identified as "dressing, cutting or shaping a log" in OEE, *Database*, 10.1.3[1] however examination *in situ* finds that there are two objects being worked, of different heights and solid in nature, consistent with two chests as recorded by C.R. Lepsius, *Denkämmer aus Aegypten und Aethiopien Ergänzungsband* II (Leipzig, 1913), xix (left). There is no evidence of the indentations or line breaks which would be expected if a log "raised off the ground (on a) ...chock or forked rest", as described by Brovarski and identified by OEE, *Database*, were represented. Since the dressing of logs is generally depicted in the context of Boat Building [Cat.12] [Cat.14] [Cat.33] [Cat.42] [Cat.43] [Cat.45] [Cat.51], its identification here as such must be considered questionable.

Note discrepancy between *LD Ergänz.*II, xix (left) and Brovarski, *Senedjemib Complex* I, fig. 45 re. the holding of the mallet by [Cat.10.1.5A]. Examination of the corresponding photograph *Senedjemib Complex* I, pl. 27b confirms Brovarski's copy as the more accurate of the two.

The position of the surviving arm and slight cupping of the hand, as copied by *LD Ergänz.* II, xix (left) and still visible *in situ*, suggests that the figure may originally have held a paint palette. Contra. Drenkhahn, *Handwerker*, 52[IV.1] who describes the figure as simply "standing in front of" the statue.

Eaton-Krauss, *Statuary*, 121 Note 652 states that the position of the workshop scenes in the tombs of Snmd-jb:Mhj and Snmd-jb:Jntj are "in relation to the internal layout of the entire chapel...identical". However owing to the different orientation of the tomb of Snmd-jb: Mhj, the scenes appear on the East wall of Room II not the North Wall.

Register 1 reproduced from *LD Text* I, fig. p.52 (lower), being in sketch form only due to extensive deterioration of the wall.

Suggested by the slight lean of the workman into the statue and the probable alignment of his hands with the statue's head when hypothetically reconstructed.

So Brovarski, *Senedjemib Complex* I, 147. The posture of [Cat.11.1.1D], namely the slight lean backwards, may be comparable to that of [Cat.11.1.1A].

See Drenkhahn, *Handwerker*, 19; Brovarski, *Senedjemib Complex* I, 148. Contra. Scheel, 'Metallhandwerk', 123[5] who suggests that the figure is heating precious metal, however the space is insufficient for the required crucible and the figure is covering the blowpipe at its mouth which is incompatible with such a procedure.
So Altenmüller, ‘Abwiegen von Metall’, 8; Scheel, ‘Metallhandwerk’, 126. Contra. Drenkhahn, *Handwerker*, 19[VI.I.I]; OEE, *Database*, 10.5.1[1]. According to Altenmüller, the basin to be weighed is that being worked on by [Cat.11.1.2J], hence the unbalanced scales. For further discussion see Altenmüller, ‘Abwiegen von Metall’, 7-9.

Note that Brovarski, *Senedjemib Complex* I, 148 Note 164 interprets the raised arm of the figure as a “gesture” but it more likely represents the action of beating. For parallel see [Cat.24.2.2H]. The erroneous direction of the hand and the apparent absence of a hammer stone as drawn by LD II.74a may account for Brovarski’s conclusion. Note that Drenkhahn, *Handwerker*, 29 and Altenmüller, ‘Abwiegen von Metall’, 9 qualify the text as “Overseer Of Weighing” and “Overseer Of Metalworkers” respectively.

But note that under magnification of LD II.74a, the stringing or fastening thread is inexplicably attached to the choker. cf. Brovarski, *Senedjemib Complex* I, 148. Contra. Drenkhahn, *Handwerker*, 19[VI.2.1-2] who describes the action as *halten* or “holding”.

Note that PM III², 234[4] and Hassan, *Giza* IV, 115 incorrectly assign the far right section of the scene to the Northern Partition Wall of Room I. Contra. Harpur, *Decoration*, 234; Y. Harpur, ‘The Identity And Positions Of Relief Fragments In Museums And Private Collections’, *JEA* 71 (1985), 42 who has convincingly proven that the fragment belongs to the South Wall of this room where it completes the Boat Building sequence above and on either side of the entrance doorway. Note further Reisner’s suggestion *Giza* I, 353[2] that additional workshop scenes may have been depicted on the West Wall.

Based on Harpur’s suggested reconstructions in *Decoration*, fig. 201; Harpur, ‘Relief Fragments’, 41 fig. 10.

Note that PM III², 233[1] and Hassan, *Giza* IV, 110 also identify a scene of drilling in Register 2, the latter specifying the use of a bow drill and hence a possible association with Carpentry. However Harpur, *Decoration*, 207 argues that the figures are just as likely to be “pounding fibres as part of the process of mat making”, in which case the scene is more accurately assigned to the theme of Marsh Pursuits. See *Decoration*, 176.

Suggested by the rope passing underneath the log, misinterpreted as an overseer’s staff or measuring rod by Vandier, *Manuel* V, 662; Hassan, *Giza* IV, 115. The missing section may have contained one or more additional figures. Note that PM III², 234[4] identifies [Cat.12.1.1A-1F] inclusive as “men felling trees”.

Described as participating in the construction process by Vandier, *Manuel* V, 672 but without identification of the specific action, contra. Hassan, *Giza* IV, 115 who suggests that [Cat.12.1.1C-1F] inclusive are “engaged in chopping the branches from the trunk of a tree”. On examination however, the object represented is clearly the bow of the same hull being worked on by [Cat.12.1.1G-1J], with supporting props visible although inaccurately drawn. The remaining traces of [Cat.12.1.1F] are consistent with [Cat.27.1.2B], therefore a similar action is likely to have been exhibited.

Note absence of plumb in the figure’s left hand in Harpur, *Decoration*, fig. 201; Harpur, ‘Relief Fragments’, fig. 10.

Note absence of Boat Building scene from tomb synopsis, subsequently published on-line by MFA, *Giza Archives*, Photo ID. B8227-NS.

Smith, *HESPOK*, 169 Note 1 alludes to the depiction of “other crafts”, in addition to Boat Building, on the destroyed East Wall, traces of which may be represented on one of the fragments shown in MFA, *Giza Archives*, Photo ID. C12990_NS. The remains of a figure holding a tool, possibly an axe or adze, are able to be discerned, however the context of the action cannot be determined. Note that Reisner, *Giza* I, 350 Note 1 describes the fragments as depicting either “boat building or craft” but not both.
So G.A. Reisner, ‘A History Of The Giza Necropolis II. Unpublished 1942 Manuscript. Appendix A: Cemetery en Échelon’, MFA, *Giza Archives*, 32d. cf. Junker, *Giza III*, 36. Note that Reisner assigns Plate 2 to the northern end of the East Wall but hypothetical reconstruction suggests that both fragments are likely to have belonged to the same scene, forming the rear and middle section of a single hull. Examination of the tomb in situ supports the placement of the scene on the southern end of the wall, as the remaining block close to the ceiling at the northern end features a line of offering bearers. cf. Junker, *Giza III*, 36.

See [Cat.8.1.1K] [Cat.12.1.1G] [Cat.38.1.1C]. The raised rear heel of the figure is indicative of this action using a long-handled adze of the same type held by [Cat.13.1.1A].

Suggested by the position of the legs. See [Cat.24.1.1A] [Cat.42.1.1A-1B] [Cat.43.2.2A]. A partly symmetrical arrangement of the figures in this instance is possible. See [Cat.26.2.3D-3E]. Note discrepancy British Museum, *Hieroglyphic Texts From Egyptian Stelae In The British Museum VI* (London, 1922), pl. xvii and T.G.H. James (ed.), *Hieroglyphic Texts From Egyptian Stelae etc.* 1 (London, 1961), pl. xxv[3] re. detail of tree trunk. Comparison with the plate published by J. Capart, ‘Note sur un fragment de bas-relief au British Museum’, *BIFAO* 30 (1931), 76 confirms the latter as the more accurate copy with BM incorrectly interpreting the head of the axe held by [Cat.14.1.1B] as a branch.

The lunge position with upraised arms assumed by [Cat.14.1.1G] is indicative of work with an axe. See [Cat.26.2.3E].

The absence of any remains of a long-handled adze and the upraised arms of the figure precludes trimming. The additional line above the hull may represent the bulwark.

Although six other fragments are classified by Vachala, *Abusir VIII*, 168-173 as *Schreinerei, Möbel* or “Joiner’s Workshop, Furniture”, these do not depict craftsmen engaged in the manufacturing process. They are more appropriately assigned to the theme of Presentation Scenes and are therefore not considered relevant to the study.

For Plates 2-6 original findspot only. Precise wall location unknown. See Vachala, *Abusir VIII*, 172; 180; 252; 278.


So Verner, *Abusir I*, 52; 54 Note 27. For technical aspects of procedure see Davey, ‘*Metalworker’s Tools*’, 182. Both Verner and OEE, *Database*, 10.5.5[1] consider the possibility that the workman is stoking the fire and/or crucible with the stick, which is compatible with the accompanying caption as it implies that liquification has been achieved, but on examination of the scene it may be observed that the stick only reaches as far as the mouth of the blowpipe.

See [Cat.30]. Corresponds to Brovarski’s description of a “coffret” or “ornamental casket” ‘Inventory Offering Lists’, 45.

Both Verner, *Abusir I*, 47 and Eaton-Krauss, *Statuary*, 128 describe the statue worked as carrying or wearing accessories, namely a broad collar with pendant and an amulet on a cord and a folded handkerchief respectively, but none of these items are visible in the line drawing consulted.

Contra. Eaton-Krauss, *Statuary*, 128; Verner, *Abusir I*, 47 who describe the action as “polishing” or “dressing” but hypothetical reconstruction of the hand indicates that it was probably rendered similarly to that of [Cat.15.1.4H] and that the tool is being pointed towards the face. Note further Verner’s error in concluding that the figure is holding the right hand of the statue when clearly this hand can be observed holding a staff.

Both Eaton-Krauss, *Statuary*, 129 and Verner, *Abusir I*, 47 identify the first figure in the group as a sculptor but it has been argued that it is in fact one half of a double statue or dyad. See M. Rocholz, ‘Statuen und Statuendarstellungen im Grab des *Ptḥ-špss*’, *SAK* 21.
The posture depicted, notably the closed fist held at the side, is identical to that of the statue being worked by [Cat.15.1.4A-4C] and is unattested in craftsmen’s postures of the period.

Note that Smith, *HESPOK*, 353 incorrectly identifies the tools held as a “mallet and chisel”.

Note that Vachala, *Abusir VIII*, 172 failed to recognise that the object being worked is the top of a shrine and not a *Kasten* or “box” and that the tool held by the figure is an adze not a *Stock* or “stick”. See [Cat.1] [Cat.33]. The caption appears unrelated to the activity depicted.

Based on the so-called ‘symbol’ of the carpenter’s profession, namely the adze over the shoulder, which is rarely attested in Boat Building scenes. For exceptions see [Cat.8.1.2F] [Cat.21.2.1J-1K].

Suggested on the basis of the rigid arm position similar to [Cat.24.2.3G]. Note however that the adze-over-the-shoulder motif is also applicable to the context of holding. See [Cat.8.1.3E] [Cat.26.2.4C] [Cat.26.2.4I] [Cat.45.1.1I-1J].

The posture illustrated is consistent with this action. See [Cat.1.1.3G] [Cat.21.1.5I] [Cat.33.1.2K]. Alternatively the figure could be weighing, the deeply curved back occasionally being observed in such scenes. See [Cat.21.1.5A] [Cat.45.1.3A]. In the absence of the sign $\mathcal{D}$, the caption refers to the type of workshop or metal not the craftsman. So Drenkhahn, *Handwerker*, 42.

Suggested by the heavy baseline observed in other reliefs found in Room IV. See L. Borchardt, *Das Grabdenkmal des Königs Ne-User-Re* (Leipzig, 1907), Abb. 103[a].

The position of the left hand on the bow is indicative of this action. See [Cat.33.1.2K]. The figure was not observed by either Borchardt, *Ne-User-Re*, 122 or Vandier, *Manuel V*, 675 who refer only to the cutting of mortices.

Note possible incorrect rendering of the figure by Vandier, *Manuel V*, fig. 269. Traces of a raised knee are visible under magnification in the original relief. See Borchardt, *Ne-User-Re*, Abb. 103[b].

Note that the figure is likely to have been rendered with one knee raised, consistent with [Cat.33.1.3H] who performs the same action.

Suggested by the lunging posture of the figure. See [Cat.12.1.1G].

Suggested by the absence of any remains of a long-handled adze and the likelihood that the arms are raised above the head. See [Cat.8.1.2K].

See [Cat.39.1.1D].

Traces of a rod are visible adjacent to the figure which identifies him as a *smsw whrt*. See [Cat.27.1.2A] [Cat.33.1.2I] [Cat.43.2.4F].


Synopsis of North Wall based on Barta, *Abusir V*, fig. 3.18. Note that Harpur, *Decoration*, 97 was unable to observe the scene of Carpentry in the lower register of this wall due to its subsequent excavation in 1991. See Barta, *Abusir V*, 107-108. Her description of the room as containing “only marsh, pastoral and river scenes” is therefore subject to review.

For parallel see [Cat.51.1.3C]. Note that Barta, *Abusir V*, 105 describes the figure simply as
The direction of the object is inconsistent with trimming. See [Cat.8.1.5F].

Note that PM III², 513[7] identifies the scene of spinning in Register 1 on the South Wall simply as “craftsmen” but the remains of whorls are clearly visible in the hands of the figures on the right. See Kanawati and Hassan, Ankhmahor, 34; N. Kanawati, ‘Ankhmahor, A Vizier Of Teti’, BACE 8 (1997), 69; Badawy, ‘Ankhma’hor, 21. The left section of the register is too incomplete to be interpreted.

Note that the object behind the head of [Cat.18.1.2K] has been drawn incorrectly by W. Wreszinski, Atlas zur Altägyptischen Kulturgeschichte III (Leipzig, 1923-1935), 34; Kanawati and Hassan, Ankhmahor, pl. 40 and Badawy, ‘Ankhma’hor, fig. 32 and should extend as far as the left ear, as able to be observed in the corresponding photographs published by Kanawati and Hassan, Ankhmahor, pl. 6 and Badawy, ‘Ankhma’hor, pl. 35 and in situ. Identified correctly as a “painter’s brush” by Eaton-Krauss, Statuary, 133 contra. Grunert, ‘Statuen’, 8 who describes it as a Stift or “peg”. The same author identifies the material of the statue as stone however the use of the phonetic determinative (Gardiner Sign List M22) indicates unequivocally that spnn is derived from a plant.

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The remains of a polishing stone are visible in the figure’s right hand. The illustration of an adze in the left hand may be the artist’s attempt to condense several actions into one. Badawy’s identification of the activity as Painting in ‘Ankhma’hor, 22 is based presumably on the position of the fingers but the holding of a polishing stone between thumb and forefinger is not unknown. See [Cat.15.1.4G]. In any case the identification is inconsistent with the accompanying caption.

Note inaccurate rendering of the small bag or sack between the two watersacks by Badawy, ‘Ankhma’hor, fig. 32. cf. Kanawati and Hassan, Ankhmahor, pl. 40.

Examination of the scene in situ indicates that the figure is holding a pointed object in his left hand similar to a needle of the type illustrated in Davies, Rekh-mi-Re”, pls. 52-53. cf. Wreszinski, Atlas III, 34. Interpreted by Kanawati and Hassan, Ankhmahor, 36, pl. 40 and Badawy, ‘Ankhma’hor, 23, fig. 32 as simply “handling”. Figure unobserved by Drenkhahn, Handwerker, 7 and Hasanien, ‘Leather Manufacture’, 76.

Based on evidence of an anvil, recorded in full by Kanawati and Hassan, Ankhmahor, pl. 40 which suggests a more vigorous procedure than polishing. See el-Khouli, Stone Vessels III, 799. The designation of the figure as jmj-r hmw.tj(.w) also supports the view that the activity may have required a greater degree of skill.

Note that Drenkhahn, Handwerker, 45-46 and R.F.E. Paget and A. Pirie, The Tomb Of Ptah-hetep in J.E. Quibell, The Ramesseum I (London, 1898), 27 do not classify the scene as Jewellery Making, the latter instead describing it as “four dwarfs looking over their master’s jewelled collars and other ornaments...as part of his ....morning avocations...”. The core elements of the depiction however are consistent with other scenes of this type included in the corpus. See [Cat.3.1.4C-4D] [Cat.11.1.3A-3D] [Cat.20.1.1A-1B] [Cat.26.1.1A-1D] and it is identified as Jewellery Making by a majority of scholars e.g. PM III², 600[16]; Brovarski, Senedjemib Complex I, 148 Note 185; Badawy, ‘Ankhma’hor, 21; Dasen, Dwarfs, 258[34] and Harpur, Decoration, 90-91, Plan 102. The insertion of such scenes amongst thematically unrelated subject matter is not unusual. See [Cat.26].

Note error in Harpur, Decoration, Plan 102 viz. the placement of the Jewellery Making scene in Register 3 on the North Wall when it in fact occupies the uppermost corner of the wall in Register 1. Merging of the upper and lower sections of Paget and Pirie, Ptah-hetep, pl. xxxv, which show scenes from two different walls, may account for this.

A falcon headed design is able to be observed under magnification. cf. Dasen, Dwarfs, 119.

Described by Myśliwiec, Merefnebef II, 150 as “a necklace... depicted in semi-profile”, but clearly conforming to the shape and design of a counterpoise, identical to those on and
beside the featured work tables. It is not unusual for the term nbw or phrase stj.t(r) nbw to be applied to the working or presentation of both collars and counterpoises, although the latter association outside of the present example is comparatively rare. See [Cat.44] [Cat.49]. The presentation of any item of jewellery in profile form however has no attestation in the known Jewellery Making corpus.

Argued by Myśliwiec, Merefnebef II, 150 as being the same table used by [Cat.20.1.1A-1B] but “in profile”, the scene in his opinion representing “the same two men in two various views”. Similarly interpreted as an example of “Egyptian aspective” in ‘Merefnebef’ http://www.osirisnet.net/mastabas/merefnebef/e_merefnebef_05.htm, an argument which can only be supported if it is accepted that the same jewellery piece is being worked. See Note 428 above.


The action depicted in a majority of cases in which a statue with staff is being worked to suggest completion. For examples see [Cat.1.1.4A] [Cat.5.1.3F] [Cat.18.1.2L] [Cat.24.2.1J] [Cat.49.2.1E]. The distance between figures precludes polishing.

Suggested by the static pose and position of the scene in the register. It is likely that the shrine or baldachin in which the statue stands is similar to that depicted in Register 4. For further see Eaton Krauss, *Statuary*, 130 Note 691.

Assigned in error to the tomb of Tij by Montet, *Eternal Egypt*, 238, fig. 51.

So Montet, *Scènes*, 313, fig. 42; Drenkhahn, *Handwerker*, 112[IV.3]. Comparison of the line drawing in P. Duell, *The Mastaba Of Mereruka* I (Chicago,1938), pl. 30 with the scene *in situ* indicates a discrepancy in the rendering of the figure’s right hand. What is in fact an adze held at the top of the handle close to the blade has been drawn as an additional finger. cf. Hassan, *Stöcke und Stäbe*, 17. Not recognised as an example of this activity by OEE, *Database*, 10.9.1. Note Montet’s error *Scènes*, 313, fig. 42 in copying the tool as an axe.

Only the feet of [Cat.21.1.2E] are preserved. To judge from their placement, the posture of the workman must be slightly recumbent rather than upright which is compatible with his companion’s instruction to apply pressure. See [Cat.53.1.1C] for comparison.

For parallel see [Cat.24] [Cat.30]; Brovarski, ‘Inventory Offering Lists’, 35, fig. 4.7[e].


See [Cat.24.2.3K] [Cat.33.2.3J]. Identified as a “*square chest with a flared top*” by OEE, *Database*, 10.1.9[3].

See Drenkhahn, *Handwerker*, 118[III]. Since the usual context for this activity is Carpentry as in [Cat.3.1.3A] [Cat.5.1.2B] [Cat.49.2.4A], the scene is more likely to have depicted the sharpening of a newly produced blade rather than a tool. Not observed by Scheel, ‘Metallhandwerk’, 123[13]; Klebs, *Reliefs AR*, 84-85; Montet, *Scènes*, 275ff.

Action identified as halten or “holding” by Drenkhahn, *Handwerker*, 21[XIV.6.7] but note evidence of threading string and position of thumb and forefinger, although rendered incorrectly, on the right hand.
A threading string is clearly visible in situ, extending from the upper edge of the necklace to the left hand of the figure. The identification of the action as stringing is further supported by the rendering of the necklace as beaded in contrast to the plain metal variety displayed in the sub-register above. Upraised fingers of right hand of [Cat.21.1.6B] omitted by Duell, Mereruka I, pl. 30. Identified incorrectly as halten or “holding” by Drenkhahn, Handwerker, 21[XIV 6.5-6].

So Andrews, Egyptian Jewellery, 71; Montet, Scènes, 286. What appears to be the remains of a chisel are visible and it is possible that the figure is tapping the destroyed upper section with his right hand. Contra. Klebs, Reliefs AR, 86 who suggests that drops are being attached, consistent with the pectorals on display, but if so convention dictates that several of these drops should already be present. See [Cat.18.1.3K].

Contra. OEE, Database, 10.5.1[8] who assumes this to be an ingot, in keeping with the sequential reading of the scenes, but drawn clearly as a vessel by H. Altenmüller, Die Wanddarstellungen im Grab des Mehu in Saqqara (Mainz am Rhein, 1998), Taf. 42. The orientation of the accompanying caption and the vertical separation line between it and the first inscription indicate that the text is spoken by [Cat.22.1.3B] not [Cat.22.1.3A] contra. Altenmüller, Grab des Mehu, 147. The title ‘Man of Min’ implies that this figure must therefore also be a mhnk. So Altenmüller, ‘Abwiegen von Metall’, 13; Altenmüller, ‘Waage’, 13-14; Kuhlmann, ‘Man des Min’, 45ff.

Inventory number cited only. No description of the fragment is provided.

P. Kaplony, Studien zum Grab des Methethi (Bern, 1976) is considered the most comprehensive study of the tomb of Mty but the fragment in question is not discussed. Also omitted from Drenkhahn’s corpus of Metalwork scenes in Handwerker, 18ff.

The remains of a figure and a crucible in the form ☯ are absent from the line drawing published by C. Ziegler, Catalogue des stèles peintures et reliefs égyptiens de l’Ancien Empire, et de la Première Période Intermédiaire, vers 2686-2040 avant J.-C. (Paris, 1990), 141 but are visible in the corresponding photograph. See Ziegler, Catalogue, 125. Not observed by OEE, Database, 10.5.3.

Note that the scene of Mat Making PM III², 643[21 bis] identified by Harpur, Decoration, 96 as a workshop scene is felt to be more appropriately assigned to a marsh or pastoral theme, the context in which it appears in the PM reference, hence it has not been included in the present study.

Separated by Moussa and Altenmüller, Nianchchnum, 74-75 into scenes of the dockyard [Cat.24.1.2A-2N] and scenes depicting the manufacture of planks [Cat.24.1.2O-2Q], however this division is considered somewhat arbitrary.

Ostensibly to fill the missing section in the hull between [Cat.24.1.2K-2L]. So Moussa and Altenmüller, Nianchchnum, 75 Note b. Labelled as a sh.t-plank, it is identified either as part of the bulwark by Hannig, Wb I. 1192[29503] or a landing plank by Jones, Nautical Titles, 187[149].

Note disagreement re. the identification of the tool held by [Cat.24.2.1A] and [Cat.24.2.1C]. Suggestions include an axe by Drenkhahn, Handwerker, 52[VIII.1;3] and Moussa and Altenmüller, Nianchchnum, 13; an adze by OEE, Database, 10.10.3[5] or a maul by Eaton-Krauss, Statuary, 116; 50. A similar operation depicted in the tomb of Tmj [Cat.33.2.2C-2D] supports the latter interpretation. See also Clarke, ‘Cutting Granite’, 113 for description of an analogous tool. The identification of [Cat.24.2.1B] as rough shaping is suggested by the context, the energy of the action and the size and weight of the stone, the latter being more compatible with beating or hammering than polishing. See Moussa and Altenmüller, Nianchchnum, 134. Contra. Eaton-Krauss, Statuary, 116 Note 628; OEE, Database, 10.10.6[5].
Drenkhahn, *Handwerker*, 57. Contra. Moussa and Altenmüller, *Nianchchnum*, 134 who suggest that the wood of the statue is being impregnated with liquid poured from a ladle. The tool however is recognisably an axe, held in the customary position, the outline of the blade being clearly visible in situ. The argument proposed by Moussa and Altenmüller, *Nianchchnum*, 134 Note 782 that the tool cannot be an axe because of its red-brown colour does not hold given the evidence of a near-identical example attested in the tomb of Nfr and K3-h3;J. See [Cat.26.2.3D]. The accompanying caption *jdr jš.t=k m h.t=f šn.t(j)* implies that it has been used to shape the statue’s midriff.

452 The chisel is tapped with the right hand contra. Moussa and Altenmüller, *Nianchchnum*, 134 and Eaton-Krauss, *Statuary*, 118 who suggest that it is being rotated in a drilling action.

453 See [Cat.5.1.4I-4L] [Cat.47.1.1E-1F]. Identified by OEE, *Database*, 10.5.10[14] as “hammering... metal cake” but what appears to be the tang of a blade is clearly visible.

454 So Andrews, *Egyptian Jewellery*, 94; Moussa and Altenmüller, *Nianchchnum*, 136; Scheel, ‘Metalhandwerk’, 150[9]. Qualified by same as the corners or ends of the apron, but its association with the term *ns “tongue”*, supported by the accompanying determinative, makes it clear that it represents the inner front flap. Contra. Drenkhahn, *Handwerker*, 34 who identifies the object as a sceptre in the shape of a papyrus blossom based on Hannig, *Wb* II. 324[12], however the juxtaposition of the two items held by [Cat.24.2.2L-2M] makes it more likely that they are both articles of clothing.

455 So Drenkhahn, *Handwerker*, 20[IX.7-8] who describes it as having two sets of streamers. Contra. Moussa and Altenmüller, *Nianchchnum*, 137 who assume that two diadems are shown. Traces of red-brown visible in situ on both the diadem and the material held by [Cat.24.2.2O] suggest that the ornament is being fashioned out of copper.

456 Traces of a dark colour, possibly dark blue, are visible in situ along the left edge of the liquid, consistent with water. Note that in a comparable scene in the tomb of Ḥm-RisetJSJ [Cat.47.1.2A-2B] the same substance is also painted blue. The accompanying caption *fj.t nbw* supports the view that the collar is being cleaned as opposed to treated.


458 So S. Hassan, *Excavations At Saqqara 1937-1938* I (Cairo, 1975), 29. This feature is otherwise unattested.

459 At least eight carriers were visible in situ to Hassan, *Saqqara* I, 30 although only the outline of seven are able to be discerned in fig. 13 and pl. xix[c]. The posture of [Cat.25.1.3B] with one arm hooked over the beam is paralleled only at Deir el-Gebrawi [Cat.45.1.4I] and appears to have been copied from the present tomb, which therefore must predate it or is its contemporary. Hassan’s view in *Saqqara* I, 5 that it is possible to date Nb-kšw-Hr:Jdw “to the end of the Fifth Dynasty but more probably it was built during the Sixth Dynasty” is therefore valid on artistic grounds. But see S. Willoughby-Winlaw, *Fifth Dynasty Mastabas At Giza: Typologies, Chronologies And The Use Of The Cemetery* (Unpublished Ph.D Dissertation. Macquarie University, 2007).

460 Terminal not observed by Drenkhahn, *Handwerker*, 18[III.3-4].

461 Contra. Moussa and Altenmüller, *Nefer And Ka-hay*, 25 and Andrews, *Egyptian Jewellery*, 69 who suggest that a terminal is being attached. However the symmetrical arrangement of the figure and evidence of a hand underneath the drops of the collar, the damaged remains of which are visible in situ, does not support this. cf. Drenkhahn, *Handwerker*, 18[III.3-4].

So Moussa and Altenmüller, *Nefer And Ka-hay*, 27; E. Hesse, ‘Die Darstellung des Schiffbaues im Grab des Nefer in Saqqara’, *Kemet* 4 (1999), 33; cf. Landström, *Ships*, 39 who describes [Cat.26.2.2A-2B] as “binding something with a line” but the rope is to be understood as part of the trussing equipment, being one winding less than that at the stern.

See Moussa and Altenmüller, *Nefer And Ka-hay*, 27 for interpretation. Contra. Landström, *Ships*, 39 and Hesse, ‘Schiffbaues’, 33 who suggest that [Cat.26.2.2F] is positioning a prop, however the direction of the hands is indicative of the block being pulled back rather than pushed forward.

Although this register could equally be classified as pertaining to Carpentry, given that the method of sourcing the timber was the same, the vast majority of tree felling scenes and those in which the logs are dressed appear in the context of Boat Building. See [Cat.12] [Cat.14] [Cat.24] [Cat.33] [Cat.43] [Cat.45] [Cat.51].

Compared in error by Moussa and Altenmüller, *Nefer And Ka-hay*, 28 Note 165 to [Cat.8.1.3G-3H] who are in fact polishing a sarcophagus lid. See Drenkhahn, *Handwerker*, 103[II.1-2].

An additional Carpentry scene is possibly depicted on the East Wall of Room II, as a continuation of the theme on the adjoining South Wall, in which a figure appears to be holding an adze. See LD Ergänz. III, xxxix[c]. The scene however is too poorly reproduced to be conclusive. Note that PM III², 495[5] describes the contents of the wall as “four registers of bringing animals etc”.

Based on traces of an elbow consistent with the holding of a tool, as able to be distinguished in Vandier, *Manuel V*, fig. 268.1 but omitted from his discussion *Manuel V*, 673, together with the raised rear foot of the figure, which is generally associated with chopping or sawing actions, and the shape of the object(s) being worked.

The posture exhibited, i.e. with both legs tucked against the chest, is consistent with this action although the absence of any traces of a tool makes identification inconclusive. See [Cat.12.1.1F].

Note that both Vandier, *Manuel V*, fig. 268.1 and LD II. 61b appear to have misinterpreted the handle of the adze as the figure’s right forearm. cf. Servin, ‘Constructions navales égyptiennes’, 63 who incorrectly associates the scene with papyrus boat building.

The figure does not appear to be holding a tool and is likely to be giving directions. See [Cat.8.1.2F] [Cat.26.2.2E].

In all likelihood the scene is an extension of those depicted on the North Wall, where three registers of similar boxes, on stands or being carried, are to be observed. See N. Kanawati and M. Abder-Raziq, *The Unis Cemetery At Saqqara* II (Warminster, 2000-2003), pl. 59[b]; R. Macramallah, *Le Mastaba d’Idout* (Le Caire, 1935), pl. x[B]. It is possible therefore that the scene illustrates the prior manufacture of one of the boxes shown.

Comparison with the scene in situ confirms this as the most accurate copy. For anomalies in Kanawati and Abder-Raziq, *Unis Cemetery* II, pl. 59[b] see Note 474 below.

So Macramallah, *Idout*, 18 contra. Kanawati and Abder-Raziq, *Unis Cemetery* II, 50 who describe the action as “handling”. Note however that the outline of a hemispherical polishing stone is visible in situ, corroborated by the position of the hands. Omitted in error by Kanawati and Abder-Raziq, *Unis Cemetery* II, pl. 60[a] where the accompanying text is recorded as $\omega(\ ) \omega(\ )$.

At the time of writing, the publication of the tomb was being undertaken by Khaled Daoud, Field Director of the Liverpool University Kairer Epigraphic Project, however line drawings of the relevant scenes were unavailable for consultation. Personal communication Professor Chris Eyre, Liverpool University, U.K. Identifications are therefore subject to qualification. See OEE, *Database*, 10.10.16[1] for further examples of unpublished scenes.
not able to be accessed by this study.

The remains of an adze handle are able to be discerned in the figure’s right hand. Note that K.A. Daoud, ‘Unusual Scenes In The Saqqara Tomb Of Kairer’, EA 10 (1997), 7 describes the figure as sitting on a “wooden stepped stool”, however reconstruction of the composition suggests that it is a high backed chair, the design of which is atypical in a workshop setting. For conventional stool types see P. Der Manuelian, ‘Furniture In Ancient Egypt’ in Civilizations III, 1631.

Action not observed by J.P. Lauer, Saqqara. Die Konigsgräber von Memphis. Ausgräben und Entdeckungen seit 1850 (Lübbe, 1977), 80. Identified by OEE, Database, 10.10.2[3] as a “sculptor using a chisel only” but this is incompatible with both the accompanying caption and the observation that a chisel, when used without a mallet, is always manipulated with a cupped hand. The outline of what could be a paint palette appears to be resting on the figure’s lap confirming the identification. The remains of the determinative  are visible above the figure’s raised hand. cf. Eaton-Krauss, Statuary, 135.

So OEE, Database, 10.11.2[8]. Identification of the activity is problematic however given that the trace outline of a possible weight under the figure’s inner arm is in evidence but no drill handle is visible, and the position of the hands is more indicative of the tapping and turning of a chisel. This nevertheless may still constitute a valid interpretation of the action as such a method of shaping and hollowing out a stone vessel is well documented in the Dynastic period. See el-Khouli, Stone Vessels II, 799[2]; Hester and Heizer, ‘Making Stone Vases’, 15. Not observed by PM III², 631[9]; Lauer, Saqqara, 80.

[Cat.29.1.2F] identified by OEE, Database, 10.5.4[1] as a “lone worker smelting a small quantity of precious metal in a crucible” but the outline of the head and back of a second individual is clearly visible in Daoud, ‘Unusual Scenes’, pl. iii. The order of actions depicted in this example is contrary to the usual sequence but may have resulted from the artist’s concern for overall symmetry when determining the final layout.

See [Cat.18.1.2G] [Cat.24.2.2A]. Not observed by OEE, Database, 10.5.5.

Copied by kind permission of the Egyptian Museum, Cairo owing to errors and omissions in the references listed. See Notes 482-494 below.


Observe only in part by Wreszinski, Atlas I, Taf. 402 and Mogensen, Mastaba, fig. 45 who omit the drill which is clearly visible on the original block. Rendered incorrectly by L. Borchardt, Catalogue général des antiquités du égyptiennes du Musée du Caire. Denkmäler des Alten Reiches im Museum von Kairo I (Berlin, 1937), 235. Identified erroneously as halt fertiges Gefäß or “holding a finished vessel” by Drenkhahn, Handwerker, 73[IV.2]. Omitted by OEE, Database, 10.11.2.

Note that the polishing stone makes contact with the surface of the vessel contra. Wreszinski, Atlas I, Taf. 402.


Note error in alignment of scales by Borchardt, Cat. Caire. I, 235 and absence of single right batten on the box below in Mogensen, Mastaba, fig. 42. Note incorrect copying of the metal ingots by both Mogensen, Mastaba, fig. 42 and Wreszinski, Atlas I, Taf. 402. Traces of a dark red colour, visible under magnification of the area, are indicative of copper.

Note omission of detail on bottom left of crucible by Wreszinski, Atlas I, Taf. 402, identified as a “side flue” by Andrews, Egyptian Jewellery, 83-84.
Copied incorrectly as a jar on a stand by Wreszinski, Atlas I, Taf. 402. Note further that the adjacent bowl has been rendered incorrectly with a spout by Mogensen, Mastaba, fig. 41.

Assigned in error to the tomb of Tjį by Montet, Scènes, 283 Note 1, fig. 39.

Note error in the positioning of the hands by Borchardt, Cat. Caire. I, 235 and the addition of a stretcher to the work table by Wreszinski, Atlas I, Taf. 402. Identification contra. E. Vernier, ‘La bijouterie et la joaillerie égyptiennes’, MIFAO 2 (1907), 134; Naster, ‘Die Zwerge’, 141 Note 18; Dasen, Dwarfs, 119; Mogensen, Mastaba, 40; Montet, Scènes, 283 fig. 39 where the scene is associated with Metalwork, the specific action being described as gilding, stretching gold wire or pouring molten metal into an ingot respectively. Both the accompanying caption and the jewellery pieces displayed in the sub-register above however confirm the context. See OEE, Database, 10.3.8[2]. Given this identification, the object on the table most likely represents the skein of threading string.

Traces are visible on Block [CG1534] but are incomplete, indicating that the original design was subsequently altered. Not observed by Mogensen, Mastaba, fig. 38; Borchardt, Cat. Caire. I, 235; Wreszinski, Atlas I, Taf. 402.

Note error by Wreszinski, Atlas I, Taf. 402 in the rendering of the figure’s posture. The inner knee is raised, as visible on the original block. Identified by Y. Harpur, ‘Old Kingdom Blocks From The Tomb Of Horemheb’ in H.D. Schneider, The Memphite Tomb Of Horemheb Commander-In-Chief Of Tutankhmun II. A Catalogue Of The Finds (Leiden, 1996), 89 Note 25 as a “man fashioning a staff” but the context suggests the manufacture of furniture, hence a plank or batten is more likely. See Mogensen, Mastaba, 40; Borchardt, Cat. Caire. I, 234; Wreszinski, Atlas I, Taf. 404.

Note error in the position of the arms of [Cat.30.1.1P] and the misinterpretation of the leg of the bed frame as a raised knee by Wreszinski, Atlas I, Taf. 404.

Examination of the area in situ establishes the remains of four registers being viewed by a large figure of the tomb owner. Plate 1 occupies the lower left section of the wall. The upper scenes have been entirely destroyed. cf. PM III2, 522[14].

Blowpipe omitted by F.W. von Bissing and A.E.P. Weigall, Die Mastaba des Gem-ni-kai I, (Leipzig, 1911), Taf. xxx[6] although clearly visible in situ. [Cat.31.1.1C-1D] not observed by von Bissing and Weigall, Gem-ni-kai, 7 and Drenkhahn, Handwerker, 21[XIII]. The sign □ is also discernible in situ. Omitted by Y. Harpur and P. Scremin, Egypt In miniature Vol.1. The Chapel Of Kagemni. Scene Details (Oxford, 2006), 495[10]; von Bissing and Weigall, Gem-ni-kai, Taf. xxx[6]; Firth and Gunn, Teti Cemeteries, 115. The caption (jmj)-r kīt Ks( )jj is also visible in situ contra. Firth and Gunn, Teti Cemeteries, 115 who state that “the only inscription remaining is the bottom of a vertical line...in front of Kagemni”.

Reconstructed from fragments held by University College London [UC14309] and the Pushkin Museum of Fine Arts Moscow [I.1.a.5566 “The戈列姆斯科夫块”]. For [UC 14309] in detail or parts thereof see also Smith, ‘Old Kingdom Reliefs’, fig. 6; G. Roquet, ‘Whm, Verbe plein et semi-auxiliare. A propos d’une Inscription d’ancien Empire’, BIFAO 78 (1978), pl. xcvii; H.M. Stewart, Egyptian Stelae, Reliefs And Paintings From The Petrie Collection (Warminster, 1979), pl. 4.

The handle of the tool is consistent with an adze. See Hodjash and Berlev, Egyptian Reliefs, pl. 3.

Omitted by OEE, Database, 10.1.25. Accompanying text not observed by Drenkhahn, Handwerker, 99[VIII.1] although visible in part on [UC14309].

The rectangular addition most likely represents the platform on which the chair sits, viewed from above. For further on chair type see Brovarski, ‘Inventory List’, 144-146.
The depiction may be comparable to [Cat.33.1.2M] as suggested by the position of the workman and the angle of his rear leg.

Vandier, Manuel V, 670. Contra. Landström’s argument Ships, 38 that the purpose of the action is to check that the plank is being beaten down evenly.

The shape and dimensions of the cavity suggest a mortice. See Clarke, ‘Nile Boats’, 42 fig. 5. Its position close to the edge of the plank however is equally indicative of a hole or channel for lashings. cf. Landström, Ships, 38; Steffy, ‘Wooden Ship Building’, 29. Note Montet’s error Scènes, 340 in identifying the chisels used as pegs. For reading of sb(n) see Hannig, Wb I. 1095[27024]; Montet, Scènes, 337[1]. cf. Jones, Nautical Titles, 184[137].

The figures here are identified as jewellers by OEE, Database, 10.3.7[3]; Drenkhahn, Handwerker, 19[VII]; Drenkhahn, ‘Artists And Artisans’, 333 but note that the block has been incorrectly placed in situ and appears to be more consistent with a Presentation scene. The depiction however of completed jewellery pieces on tables and the dwarf-like stature of the figure on the left, holding what has been confirmed as the fastening string of a counterpoise (Personal Communication. Mr. Saleh Alteia, Saqqara Antiquities) copied in error as a reed pen by Wild, Tombeau de Ti III, pl. clxxiii, suggests that Jewellery Making scenes may once have been depicted in the vicinity.

Based on the posture of the figure, who is possibly leaning forward to check the scales, and the positioning of the scene as the precursor to the metalworking sequence. See [Cat.45.1.3A].

For further see Vandier, Manuel III, 8. cf. Klebs, Reliefs AR, 82 whose identification of the action as “gilding” is clearly false.

Smith, HESPOK, 106 allows for the possibility that the statue is limestone, however it is painted red-brown and is devoid of negative space between the legs, clearly establishing it as wood. See Eaton-Krauss, Statuary, 57; 125; Junker, Künstler, 27; Lauer, Saqqara, 51; Schäfer, Principles, 49.

So Klebs, Reliefs AR, 80. However the identification of [Cat.33.2.2K] as a painter is disputed, with Klebs suggesting that the figure is a sculptor, but given that in many corpus examples the presence of a staff is associated with Painting, this action must also be considered a possibility. The same reasoning applies to [Cat.33.2.2L].

This identification, although tentative, would balance the scene, however the action of Painting is also feasible.

Note Wild’s error Tombeau de Ti III, pl. clxxiv in copying two polishing stones in the hands of [Cat.33.2.3B-3C]. Examination of the scene in situ confirms the outline of only one stone in each case.

So OEE, Database, 10.1.13[2]. Contra. Drenkhahn, Handwerker, 120; A. Erman, Reden, Rufe und Lieder auf Gräberbildern des Alten Reiches (Berlin, 1919), 43; Lauer, Saqqara, 52; R. Hamann, Ägyptische Kunst. Wesen und Geschichte (Berlin, 1944), 147. See Klebs, Reliefs AR, 88; H. Altemüller, ‘Daily Life In Eternity-The Mastabas And Rock Cut Tombs Of Officials’ in Egypt. The World Of The Pharaohs, R. Schulz and M. Seidel (eds.) (Cologne, 1998), 87 for identification of the object as a box. Note that the latter appears to have confused the chisel with a wooden peg. For reading of wmt and stj.wt as interpreted here see Faulkner, CD, 60.

Note the erroneous identifications of the object as a “a log” and “a door” by Lauer, Saqqara, 52 and Junker, Künstler, 27 respectively.

Note that this is a copy of the full composition Block [JE39866]. Other publications, for example Klebs, Reliefs AR, 83, Abb. 66; Montet, Scènes, 296, fig. 40; Clarke and Engelbach, Masonry, 203, fig. 246 and Sleeswyk, ‘Hand Cranking’, 26, fig. 2, record only the left section of the fragment or part thereof, i.e. [Cat.34.1.1A]. Note also that the latter
two references, in addition to G. Goyon, ‘Les instruments de forage sous l’ancien empire Égyptien’, *JEOL* 21 (1970), 158, fig. 13, pl. xxiii, incorrectly assign the fragment to the Temple of Sahure at Abusir.

514 So Harpur, ‘Old Kingdom Blocks’, 82[gs] based on its correspondence to a Boat Building figure in the tomb of *Tj*j [Cat.33]. If so, two varieties of posture are possible, either Boat Building Posture 16N: Semi-recumbent with one leg raised one leg extended and holding the adze in two hands [Cat.33.1.2G] or Boat Building Posture 16O: Semi-recumbent supported by one hand with one leg raised one leg extended and holding the adze across the opposite shoulder [Cat.33.1.1D]. Her description of the figure as “kneeling backwards” with the foot raised off the baseline as shown is not able to be accounted for in the *Tj*j scene, however the presence of what may be a *smsw whrt* with a measuring rod in the register below nevertheless appears to confirm the context as Boat Building.

515 Suggested by the position of the figure working the exterior of the hull from the front, similar examples being observed in the tombs of *Rc-šps* [Cat. 27.1.21] and *Tjj* [Cat.33.1.2M], both of identical provenance and date to the block in question. The height of the hull relative to the figure however would indicate that the workman is most likely bending forward, as in the *Rc-šps* scene.

516 The signs ⎡⎣ ⎦⎤ are visible in trace form under magnification. Not observed by Harpur, ‘Old Kingdom Blocks’, 87. This phrase, being equally associated with Carpentry [Cat.1] [Cat.10] [Cat.33] [Cat.45] [Cat.48], could indicate that more than one industry was originally illustrated on the block.

517 Blocks [OK 43-45] described by Harpur as “certainly from the same scene, linked by size compatibility and obvious similarities in style and technique”, ‘Old Kingdom Blocks’, 81. Block [OK 35] and [OK 42] possibly part of the same composition based on subject matter.

518 Given that a majority of the blowpipe held by this figure is visible under magnification but no lower hand is present, it follows that the workman may be clearing the pipe with his free hand as seen in [Cat.15.1.2B], this scene being roughly contemporaneous with the present example as argued in Note 522 below. The signs ⎡⎣(?) ⎦⎤ are visible under magnification and, when read in combination, are likely to form part of the idiomatic text suggested here. If so, this may refine the date proposed to V.6L-9, given that all other recordings of the phrase in the current corpus occur within this period. See [Cat.15] [Cat.24] [Cat.30].

519 On the basis of size comparison with the adjacent figures, it is concluded that [Cat.36.3.1A] must be seated on a stool or block and given that, with one exception [Cat.41.1.3A], carpenters are never depicted in this way, Harpur’s identification of the activity as Carpentry in ‘Old Kingdom Blocks’, 88 is subject to revision. In keeping with the context of the preparation of a shrine, it is suggested that the figure is in fact working on a statue, the most likely action being that of polishing, as paralleled in the tomb of *#w-n-Ra* [Cat.8.1.3A], although painting and trimming are also possibilities.

520 The configuration of the shrine suggests that one of its doors is open. For parallel see [Cat.8.1.3E-3F].

521 Note possible parallel in the tomb of *Nfr and K3-h3.j* [Cat.26.2.4A] viz. width of sawing post, position of bindings, apparent absence of weight and protruding tip of saw blade, thus providing further potential evidence of a *terminus ante quem* of V.6 for this block.

522 There is a strong case to support the view that Blocks [OK 43] and [OK 45] do in fact join, contrary to Harpur’s interpretation, ‘Old Kingdom Blocks’, 81 and if so form part of the same scene of trimming as described. The identification of the activity as the “fashioning of a staff secured in a vice” by Harpur, ‘Old Kingdom Blocks’, 88 is counter to the conventional representation of such a procedure, as seen in [Cat.15.1.1A-1B] [Cat.15.1.1G] [Cat.21.1.2C], and is incompatible with both the projected length of the object and the height and trajectory of the tool. What Harpur interprets as the fulcrum and stand of the vice could in fact represent the handle and outer edge of the paddle blade illustrated on Block [OK 43],
resting against a stake anvil for stability and support. Given that the working of a paddle is restricted on present evidence to the period V.5-VI.1 [Cat.3.1.3B] [Cat.21.1.3E], the latter example could provide a possible upper dating limit for the tomb, while the inclusion of an anvil in a trimming scene again supports a terminus ante quem of V.6. See [Cat.1.1.2C] [Cat.26.2.4G-4I].

Identified by Harpur, ‘Old Kingdom Blocks’, 88 as cutting holes into a couch or bed but the conventional presentation of this procedure, when the figure performs it from a seated position on top of the frame, is with both legs overhanging to simulate straddling. See [Cat.24.2.3H] [Cat.32.1.1C]. The example cited by Harpur for the purpose of comparison [Cat.21.1.3G] in fact illustrates the working of a door leaf and differs in posture. The straight edges and dimensions of the object conform more to the shape of a box. See [Cat.1.1.2B] [Cat.10.1.3A]. Both of these scenes fall within the proposed dating period for the present tomb.

Suggested placement based on Harpur, Decoration, 75, Table 5.3.7 re. position of scenes of workshop pursuits in L-shaped Offering Rooms. J. de Morgan, Fouilles à Dahchour en 1894-1895 II (Vienna, 1903), 2 failed to specify the precise location of the scenes in question.

For comparable posture see [Cat.15.1.3D]. The remains of the inscription d(‘m) j(n) (bd.tj) nbw and the adjacent completed vessels confirm that the figure is engaged in Metalwork. See [Cat.21.1.5K-5N] [Cat.22.1.1C-1D] [Cat.45.1.3N-3O].

See [Cat.45.1.2J] [Cat.48.1.4G].

Computer reconstruction establishes a high probability that Fragment No.30 published in A. el-Khouli, Meidum (Sydney, 1991), pl. 44 forms part of the lashing scene in the lower register. Both the angle and the thickness of the rope are compatible with the traces that remain. cf. [Cat.39.1.1B].

The scene is located on the south side of the doorway. Note error in Harpur’s original plan, Decoration, Plan 1 and in Y. Harpur, The Tombs Of Nefermaat And Rahotep At Maidum. Discovery, Destruction And Reconstruction (Oxford, 2001), 96, fig. 90.

More likely the former. See Vandier, Manuel V, 665. Note evidence of knots and indentations indicating that the bindings are not carved imitations, as commonly attested in early wooden boat building, but have passed through the holes cut by the figure. See Marx, ‘Egyptian Shipping’, 151; Partridge, Transport, 26.

Contra. Petrie, ‘Egyptian Shipping’, 65 who suggests that [Cat.39.1.1B-1C] are “securing a papyrus covering for the deck”, similarly interpreted by Servin, ‘Les constructions navales’, 159. Note that the destroyed hand is likely to be holding a hammer stone. See parallel [Cat.26.2.2A] but in the context of trussing.

Traces of the figure’s legs and rear foot are visible under magnification. In the context of Boat Building and given the static posture exhibited, these are most likely the remains of an overseer. See [Cat.16.1.11] [Cat.27.1.2A] [Cat.43.2.4F] [Cat.51.1.1A].

See [Cat.8.1.1K] [Cat.12.1.1G]. [Cat.40.1.1C] omitted by Petrie and Griffith, Deshasheh, pl. xiii. Scene itself omitted by Klebs, Reliefs AR, 102ff.; Montet, Scènes, 331ff.; Vandier, Manuel V, 659ff.; Harpur, Decoration, 444, Plan 139.

Note Petrie and Griffith’s misinterpretation of the action Deshasheh, pl. xiii in rendering the figure as if holding up the hull.

A polishing stone was originally present, as seen in Petrie and Griffith’s earlier recording Deshasheh, pl. xiii. The first sign of the caption, as recorded by Kanawati and McFarlane, Deshaha, pl. 28, appears to be ꜜꜝh.
Note that this is one of several possible actions attested in a Carpentry context which would correspond to the posture exhibited. Equally valid interpretations include trimming or sanding a box or other item of furniture or sharpening an adze.

The figure appears to be squatting or sitting, as observed in the more detailed copy recorded by Petrie and Griffith, *Deshasheh*, pl. xiii, and could be working on a box, however the traces are too indistinct to interpret conclusively.


The identification of a counterpoise is based on the narrowness of the space between the workers. See [Cat.18.1.3F-3G]. Described by Dasen, *Dwarfs*, 264[59] as a generic scene of “metalworking”. Considered by OEE, *Database*, 10.4.7[1] to be a scene of “dwarves engaged in leatherwork” but this appears unlikely given the absence of any parallel in the corpus of this industry being performed at a work table and the corresponding presentation of items of both leather and jewellery by [Cat.40.1.3H-3J].

A box in a sub-register is generally indicative of Carpentry, hence the scene in this case is likely to be a continuation of the activities in Register 2. See [Cat.24] [Cat.45].


Based on a near identical representation in the tomb of Snḥm-jb:Mḥj [Cat.11.1.2J]. While it cannot be excluded that the figure is assisting with the weighing, given that two individuals are invariably depicted in such scenes, an obvious similarity to the example cited in terms of posture and hand action is to be observed. If correct, the figure constitutes further evidence of Memphite influence on Deshasheh decoration as recognised by Harpur, *Decoration*, 116-117 but without specific reference to this scene. Not observed by Kanawati and McFarlane, *Deshasha*, 26; Drenkhahn, *Handwerker*, 21[XVI.2]; Scheel, ‘Metallhandwerk’, 124[23]. Recorded inaccurately by Petrie and Griffith, *Deshasheh*, pl. xiii.

Contra. OEE, *Database*, 10.5.1[10] who identifies this as “a lump or ingot of metal” but the clear outline of a basin is recorded.

Traces of an axe-head and the remains of a figure are visible under magnification. Recorded but not identified by Kanawati and McFarlane, *Deshasha*, 52, pl. 49. Omitted by Petrie and Griffith, *Deshasheh*, pl. xxi. Not observed by Drenkhahn, *Handwerker*, 99[X.1-2]. For parallel see [Cat.49.2.5B].

Note discrepancy in the position of the hands of [Cat.41.1.2B] in Petrie and Griffith, *Deshasheh*, pl. xiii.

Note that there are four headrests depicted. Copied incorrectly by Petrie and Griffith, *Deshasheh*, pl. xiii.


Note erroneous depiction of the tool as a brush (or chisel?) by Petrie and Griffith, *Deshasheh*, pl. xxi. As a result misinterpreted by Duell, ‘Easel Painting’, 178 Note 4 as “an artist painting a door”.

So Drenkhahn, *Handwerker*, 7[V.1-2]; OEE, *Database*, 10.4.6[2]. Note Petrie and Griffith’s misinterpretation of the depiction as a “frame” in *Deshasheh*, 45. Although attested in panther skin, as shown by Smith, ‘Prince Min-Khaf’, 158, the use of the term phː.t to describe the garment, a variant of the more common ḫː.t meaning a raw, untreated hide, appears to be in error given that the coat displays evidence of processing e.g. borders and shoulder ties.

Note absence of Plates 2 and 3 from scene synopsis owing to their omission from *LD II*. 111b, the principal reference for the tomb of Ṯȝ-‘nḥ-Ppjḥ: ḫnnw-ḥtp: ḫpj prior to the publication of A. Varille, *La tombe de Ni-Ankh-Pepi à Zàouyet el-Mayetîn* (Le Caire, 1938).

Composite based on *LD II*.111b (Registers 1 and 2) and Varille, *Ni-Ankh-Pepi*, pl. ix[FG] (Register 3). The lower register was not recorded by Lepsius’ draughtsmen in 1843 owing to its partial burial in debris. Its contents were subsequently reconstructed based on a parallel in the tomb of ḫw-ns [Cat. 43.2.3A-3E].


So PM IV, 135; Harpur, *Decoration*, 445, Plan 40; Smith, *HESPOK*, 215. Implied by Jequier, *Les frises d’objets*, 274 Note 2 in the use of the term d’armes. Contra Klebs, *Reliefs AR*, 87-89; OEE, *Database*, 10.1.6[1] who identify the objects in Registers 1, 3 and 4 as “arrows”. Given their shape it is possible that they are to be interpreted as oars (see McKergow, ‘Water Transport’, 229; Landström, *Ships*, 55), however in light of the other objects present, the classification of the activity as Carpentry remains the same.


The scene is otherwise unattested in the corpus, hence its identification is somewhat problematic. However the depiction of a stone prop and the interlocking arrangement of the planks is consistent with the process of stacking the timber after it has been sawn to allow it to dry. The figure probably trims the rough cut planks prior to this being done. See Killen, *Egyptian Woodworking*, 13-14; Winlock, *Models*, 33-34.

Note the possibility that two logs are being carried, the first of which has been destroyed.

Note that the tool in the left hand of [Cat.43.2.5H] has been copied incorrectly as a saw by *LD II*.108.

A further item is not identified by Davies, *Sheikh Said*, 13 but is likely to be a dish or shallow bowl. See A. Radwan, *Die Kupfer und Bronzegefäße Ägyptens* (München, 1983), Taf. 32[160I).

See Note 165 above regarding the order of operations. Action misinterpreted by Drenkhahn, *Handwerker*, 112[II.2] as halten or “holding” despite the caption (j)įː.t mdw being clearly visible.
Note additional scenes of Stone Masonry in this tomb, incorrectly identified as “Boat Building” by PM IV, 244[12-13]; Davies, Deir el-Gebrawi I, 21; Harpur, Decoration, 448, Plan 143 despite the figures being clearly designated hrtv.w-ntr “stone masons” and the depiction of masonry tools. For identification of object being worked see N. Kanawati, Deir el-Gebrawi II (Oxford, 2007), 50; H.G. Fischer, ‘A Foreman Of Stoneworkers And His Family’, BMMA 17 (1959), 146; Eaton-Krauss, Statuary, 50 Note 240; Lucas and Harris, Materials, 66; Smith, HESPOK, 105.

Identified in error as bohren or “drilling” by Drenkhahn, Handwerker, 73[IX.1-3].

So Kanawati, Deir el-Gebrawi II, 47. The posture is more indicative of this action than gilding as suggested by OEE, Database, 10.5.11[3] which is typified in a majority of cases by the stretching out of the gilding hand to effect the operation. What may have been interpreted as a piece of gold foil in the workman’s outer hand, similar to that illustrated in [Cat.24.2.2K-2O], is in fact his thumb, its prominence being a design characteristic of many of the figures in this tomb.

Erman, Reden, Rufe und Lieder, 44; Klebs, Reliefs AR, 87. See [Cat.8.1.3E]. Described as “polishing” by Drenkhahn, Handwerker, 102[V.1-2]; Davies, Deir el-Gebrawi I, 19; Kanawati, Deir el-Gebrawi II, 47; OEE, Database, 10.5.31[3]. Although the statement by [Cat.45.1.11] alludes to this procedure, the position of the arms is inconsistent with such an operation and no polishing stones are visible. The accompanying text may be understood therefore as referring to the high gloss which prior polishing of the wood has achieved.

The remains of a mallet handle are visible below the right palm of the figure. Not observed by Eaton-Krauss, Statuary, 136. Contra. Vandier, Manuel III, 4 who interprets the posture as the sculptor admiring his finished work.

Drenkhahn, Handwerker, 21[XVII.1-2] describes the action as halten or “holding”, as does Kanawati, Deir el-Gebrawi II, 47, but customarily in such cases one hand supports the piece from below. cf. Davies, Deir el-Gebrawi I, 19; Andrews, Egyptian Jewellery, 72. For parallels see [Cat.24.2.3A-3B] [Cat.29.1.1D-1E].

Vandier, Manuel III, 4 and Kanawati, Deir el-Gebrawi II, 48 identify the point of contact as the wig and head respectively, however hypothetical reconstruction of the upper part of the statue shows it to be the face, as confirmed by the caption g3(f) hr twt. Described as “affixing” by Eaton-Krauss, Statuary, 137 citing H.G. Fischer, ‘Notes, Mostly Textual On Davies’ Deir el-Gebrawi’, JARCE 13 (1976), 13; 16, however the presence of a paint brush suggests that the action is decorative.

As indicated by the accompanying caption and hence to be understood as commencing the sequence. So Davies, Deir el-Gebrawi I, 20 and Drenkhahn, Handwerker, 29. Contra. Scheel ‘Metallhandwerk’, 124[18] and Altenmüller, ‘Abwiegen von Metall’, 10-11 who interpret the scene as depicting the weighing of metal which has already been processed (Endproduktwiegen) and is therefore to be read last. Note however that in other examples where this is the case, a completed vessel invariably will be shown. See [Cat.5.1.5D] [Cat.11.1.21] [Cat.22.1.3B] [Cat.40.1.3N]. The separation of the scene from the melting and beating sequence is consistent with other examples of illogical placement which characterise this section of the North Wall. For further discussion see Harpur, Decoration, 121 but compare the views of Kanawati, Deir el-Gebrawi II, 51. For anomalies in the depiction itself, namely the position of the plummet, see Glanville, ‘Weights And Balances’, 20-22; S.R.K. Glanville, ‘Weights And Balances In Ancient Egypt’, Nature 137 (1936), 890.

Sleeswyk, ‘Hand Cranking’, 26 argues that such drills were used only to centre the hole but the accompanying caption makes it clear that the stone in this instance is being pierced not simply marked. Note that both figures are identified in error as dwarfs by PM IV, 244[12-13].

Note omission of scene in tomb synopsis, the contents of the North Wall being described by PM IV, 242.67[2] only as “deceased with family harpooning fish and servants preparing bed.”
Schematic summary of North Wall only, with location of scene marked and identified as “dwarfs with collars (two groups)”. The scene itself was never published. Note that Davies Deir el-Gebrawi II, 29 alludes to further workshop scenes in the upper right register of the North Wall, described as containing either “craftsmen or scribes”, however examination of Kanawati, Deir el-Gebrawi I, pl. 55 confirms them as the latter.

The colour of the liquid is not identified by Kanawati, Deir el-Gebrawi I, 77 nor Davies, Deir el-Gebrawi II, 29, however in a parallel scene in the tomb of Hm-Rc:Jsj [Cat.47.1.2A-2B] it is described as “blue”. See Davies, Deir el-Gebrawi II, 24. It has been argued elsewhere in the present study that such liquid is likely to be water. Note that Davies, Deir el-Gebrawi II, 29 and OEE, Database, 10.3.10[14] describe the scene simply as “dwarves occupied with jewellery” and “dwarf jewellers” respectively, without specification of action, neither of which can be supported on examination.

Davies, Deir el-Gebrawi II, 29 was able to observe “two groups” of figures on the wall in 1900. The identification of the second pair as “drying” is based on the probability that the sequence depicted parallels that in the tomb of Hm-Rc:Jsj but in the reverse order. See [Cat.47.1.2C-2D].

Note reference to Jewellery Making scene as “metal workers” and omission of Boat Building scene in tomb synopsis.

So Drenkhahn, Handwerker, 22[XIX.5-6]; Davies, Deir el-Gebrawi II, 24; Klebs, Reliefs AR, 86. The tang of the blade is clearly visible in the left hand of [Cat.47.1.1E]. Not observed by Kanawati, Deir el-Gebrawi I, 51 and Scheel, ‘Metallhandwerk’, 124[20]. Contra. OEE, Database, 10.5.10[18] where the action is described as “hammering...metal cake”.

The caption mnh “stringing” is clearly incompatible with the action depicted and must therefore be regarded as draughtsmen’s error. A number of such errors are attested on the North Wall. See the comments of Davies, Deir el-Gebrawi II, 23. Translated as “furbish” by Davies, Deir el-Gebrawi II, 24 and Wilkinson, Egyptian Jewellery, 3. For reading of rw(j) see Faulkner, CD, 147.

Note the interpretation of H. von Balcz, ‘Symmetrie und Asymmetrie in Gruppenbildungen der Reliefs des Alten Reiches’, MDAIK 1 (1930), 144 that the figures are raising and positioning the log in readiness for carrying, hence their unconventional arrangement whereby they are facing each other. cf. Davies, Deir el-Gebrawi II, 25. See Jones, Nautical Titles, 184[135] for alternative reading of sw(A) as swt “hull planking”.

Suggested by the depiction of completed jewellery pieces, the scene of their manufacture, if it existed, probably now lost in the destroyed section of the wall.

The remains of an adze blade and handle are able to be recognised in Davies’ dotted outline of the figure in Deir el-Gebrawi II, pl. x. See also Davies, Deir el-Gebrawi II, 10; Eaton-Krauss, Statuary, 138. Not observed by Drenkhahn, Handwerker, 53[XIV.2].

So Davies, Deir el-Gebrawi II, 10. Interpreted as a workman “polishing or sanding a shrine” by OEE, Database, 10.1.31[4], based presumably on the completed example in the same register, although the significant gap in the wall may preclude any connection.

Traces of a foot are visible overhanging the stern, a posture typically associated with this action. See [Cat.8.1.2D] [Cat.45.1.4G] [Cat.45.1.4M].

Note that the bow of the boat has been shortened disproportionately to accommodate the figure. Possible traces of a bulwark are also to be observed.

Described as “the steering paddle of the boat” by Davies, Deir el-Gebrawi II, 11 however its shape is more consistent with an oar. See Landström, Ships, 55. cf. Vandier, Manuel V, 680. Identified only as a “boat builder fashioning a narrow length of wood...” by OEE, Database, 10.12.8[5]. For reading of dkª as “fashioning” see Hannig, Wb 1. 1482[39286]; A. Erman and H. Grapow (eds.), Wörterbuch der ägyptischen Sprache V (Leipzig,1931),

Blackman and Apted, *Meir V*, 26 note the possibility that the figure may be twisting wire, however the use of the term *swś* in a scene of Textile Manufacture on the South Wall of Room I supports the identification of the material as thread. See Blackman and Apted, *Meir V*, pl. xv[3].

Note Junker’s argument ‘Erz und Erzarbeiter’, 99-100 that the sign  in the accompanying caption *jmj-r bld tj.(w)* has been selected on the basis of its resemblance to the type of crucible used in the scene. Examination of other Metalwork scenes in the corpus proves this proposition to be consistent in a number of cases. See [Cat.3] [Cat.21] [Cat.22] [Cat.44] and [Cat.47].

Drenkhahn, *Handwerker*, 102[VII] describes the shrine as zur Aufnahme einer Vase or “for the reception of a vase” but a small statuette is also clearly visible. cf. Eaton-Krauss, *Statuary*, 141; Junker, *Irj*, 63. The context is therefore in keeping with other shrine painting scenes documented in the corpus.


As identified in the accompanying caption viz. *mnḥ św.t tw n.t ḫt sjn*, the stepped plank depicted represents only a section thereof, to which a corresponding piece and batten will be attached. For further description of construction technique see Drenkhahn, *Handwerker*, 108ff., Abb. 34; Fischer, ‘Egyptian Doors’, 91ff.

The piece represents a section of the plank cut by [Cat.49.2.5A-5B]. The protrusion to the right of the adze blade appears to be either residual wood fibre or the remains of a branch or knot. It is possible that the action is related to the production of battens for the door leaf depicted in Register 4.

Identified as a “mason chiselling a block of stone, possibly to shape it into a slender vessel” by OEE, *Database*, 10.11.1[1] but neither the accompanying caption nor evidence of a reed brush and bowl support this.

Not observed by Drenkhahn, *Handwerker*, 7ff.; Hasanien, ‘Leather Manufacture’, 75ff.; Junker, *Weta*, 5ff. Given that the scenes in this register may have been inaccurately copied by Blackman and Apted, *Meir V*, 30 and that specific colour identification of the objects is not provided, classification of [Cat.49.4.2A-2B] remains inconclusive. The actions described however would form a logical manufacturing sequence if able to be confirmed, supported further by the translation of *ḥt* (?) as “threadbare” by Faulkner, *CD*, 179; Erman, *Wb* V. 233 which may be used here as a possible reference to the steeping of a hide for depilation. Furthermore it may be observed that the piece of leather featured in the sub-register adjacent to [Cat.49.4.2C] is identical in size and shape to the object being worked by [Cat.49.4.2B].

The sequence of browsing goats, felling trees and carrying logs is indicative of wooden boat building. See [Cat.12] [Cat.24] [Cat.43]. el-Khouli and Kanawati, *el-Hammamiya*, 74 note that the scene “continued further to the left”, allowing for the possibility that the complete sequence of activities once existed. This may have continued right onto the adjacent East Wall where traces of figures have been identified by el-Khouli and Kanawati, *el-Hammamiya*, 75.

OEE, *Database*, 10.12.1[8] expresses some reservation that this is the appropriate identification but the two-handed action is indicative of the use of an axe, albeit an unusual pose, and there are no goats present in the vicinity of the tree as would be expected if a browsing scene was intended.
Suggested by the uniform posture of each figure and the placement of the arms consistent with carrying a sling. See [Cat.24.1.2A-2H]. Traces of what could be the sign $\mathcal{G}$ (Gardiner Sign List G41) are also discernable at the top of the register.

Reference to Boat Building omitted. Identified erroneously as “carpenters and beating flax(?)” after E.J.H. Mackay, L. Harding and W.M.F. Petrie, *Bahrein And Hemamieh* (London, 1929), 32 whose misinterpretation of the scene was the result of incomplete copying as per pl. xiv.

Note absence of detail in Mackay, Harding and Petrie, *Hemamieh*, pl. xiv viz. hedgehog head-shaped bow, bulwark and props. Note further the omission of what appears to be part of a keel at the stern of the boat, as recorded by el-Khouli and Kanawati, *el-Hammamiya*, pl. 69, contrary to the prevailing view of a majority of scholars that such a feature did not exist at this time. See for example Jones, *Boats*, 75; Hodges, *Technology*, 105; A.M.J. Tooley, ‘*Boat Deck Plans And Hollow Hulled Models*’, ZÄS 118 (1991), 75; Clarke, ‘*Nile Boats*’, 9; Steffy, *Wooden Ship Building*, 33; R.O. Faulkner, ‘*Egyptian Seagoing Ships*’, JEA 26 (1940), 4; McKergow, ‘*Water Transport*’, 228.

Suggested by the position of the arms, although otherwise unattested in the corpus. The tool is identified as an adze by el-Khouli and Kanawati, *el-Hammamiya*, 66 and while rendered unconventionally, its smaller blade size in comparison with those depicted in Register 4 is taken as confirmation that it is not an axe. For closest parallel see [Cat.26.2.3F-3H].

The upraised arm suggests the use of an axe or mallet and chisel, however the latter tools are rarely employed in a standing position in Carpentry and/or Boat Building scenes. Poor preservation of the figure prevents the precise nature of the activity from being identified.


See [Cat.53.1.2B]. Note that in order to maintain correct anatomical proportions, the figure in this case must also be sitting. The text is possibly to be restored to $jr.t~k.tj.n...$ ‘*Carrying out work by the .....*’.

Not observed by OEE, *Database*, 10.5.10 however both the posture and the accompanying caption are indicative of this procedure.

See [Cat.49.2.5B]. Suggested by the positioning of the right foot as an anchor.

Based on the assumption that it is identical to that of [Cat.54.1.2F-2I] but with a reduced number of figures. A second metal beater is likely to have been depicted in the vacant space. For discussion of symmetry in metal beating scenes see Balcz, ‘Symmetrie’, 142-144; Schäfer, *Principles*, 185; 226.

Note omission of Metalwork scenes in tomb synopsis. Only the southern section of the West Wall and the North Wall (identified as the “Left Wall” and “Rear Wall” respectively) are described, based on P.E. Newberry, ‘The Inscribed Tombs Of Ekhmim, *AAA* 4 (1912), 117.

Traces of an additional item are able to be discerned to the right of the scribe’s palette, however deterioration of the area prevents identification. Not observed by N. Kanawati, *The Rock Tombs Of el-Hawawish. The Cemetery Of Akhmim* (Sydney, 1980), 21.

Kanawati, *el-Hawawish* I, 21 initially interpreted the depiction as a punishment scene, subsequently rejecting this view on the basis of a parallel caption recorded in the tomb of $\text{Spj-pw-Mnw:Hnj}$ which confirmed the reading of the destroyed text as “Fashioning with an axe”. See Kanawati, *el-Hawawish* II, 22-23. However neither the line drawing nor *in situ* photographs of the scene, made accessible to me by kind permission of Dr. Alexandra Woods (Macquarie University), are able to substantiate the activity as Carpentry as described by OEE, *Database*, 10.1.37[4]. The remains of the prone figure are painted red-brown consistent with it being a workman, contrary to my initial interpretation of it.
as potentially a statue, similar to that illustrated in [Cat.24.2.1D-1E]. Therefore, either the depiction or the caption must be regarded as an anomaly, perhaps indicating that the composition was altered in antiquity from the original plan.

Not observed by OEE, Database, 10.5.10.

Specific reference to the scene of metalworkers is omitted. Likewise, P.E. Newberry in ‘A Sixth Dynasty Tomb At Thebes’, ASAE 4 (1903), 97, while noting that decoration was discovered “on the outer face of the right-hand pillar”, was apparently unable to see the scene in question, identifying only “a standing figure of Ahy (sic)” and “two painted figures of his sons”.

No characteristic elements of Metalwork scenes are able to be discerned in Register 2 of pl. 15[3] in M. Saleh, Three Old Kingdom Tombs At Thebes (Mainz am Rhein, 1977), contrary to his description Three Old Kingdom Tombs, 25 and that of Harpur, Decoration, 26, however the area is too poorly preserved to be conclusive.

Identification of [Cat.55.1.1A] as per Harpur, Decoration, 26; Saleh, Three Old Kingdom Tombs, 25; Scheel, ‘Metalhandwerk’, 124[28]. However the possibility that the figure is beating a blade consistent with other el-Khokha tombs cannot be excluded. See [Cat.56.1.1F] [Cat.57.1.1F].

A similar object depicted in the identical context in the tomb of Hntj [Cat.57.1.1F] is identified by Saleh, Three Old Kingdom Tombs, 20 as a “copper axe” but its shape, allowing for enlargement, is more consistent with the blade of an adze. See Killen, Egyptian Furniture I, pl. 4[c]; W.M.F. Petrie, Tools And Weapons (London, 1917), pl. xvii. Described by both Saleh, Three Old Kingdom Tombs, 14 and Scheel, ‘Metalhandwerk’, 124[26] as simply “beating (sheet) metal”. Not observed by OEE, Database, 10.5.10.

Note omission of Metalwork scene. Subsequently published by Saleh, Three Old Kingdom Tombs, fig. 41, pl. 11.

Note omission of workshop scenes in tomb synopsis PM V, 235[5-6], identified here only as “preparing beer and food”.

The kneeling posture and depiction of a blowpipe points conclusively to an association with Metalwork, the specific identification being based on a parallel scene in the tomb of Nj-4th-n-Hnumw and Hnumw-hpt. See [Cat.24.2.2I-2J]. Given the size of the crucible, the metal in this scene is also likely to be gold. So Klebs, Reliefs AR, 84.

The posture is consistent with this action, should the scene prove to be an extension of the Metalwork activities to the immediate right. See [Cat.18.1.2H-2I].
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JARCE  Journal Of The American Research Center In Egypt (Boston/Princeton/New York/Cairo)

JEALK  Journal Of Egyptian Archaeology (London)

JEOL  Jaarbericht van het Vooraziaatsegyptisch Genootschap “Ex Oriente Lux” (Leiden)

JMFA  Journal Of The Museum Of Fine Arts (Boston)

JNES  Journal Of Near Eastern Studies (Chicago)

JANES  Journal Of The Ancient Near East Society Of Columbia University (New York)

JSSEA  Journal Of The Society Of The Study Of Egyptian Antiquities (Toronto)

Kemet  Kemet. Eine Zeitschrift für Ägyptenfreunde (Berlin)

KMT  KMT: A Modern Journal Of Ancient Egypt (San Francisco)

Levant  Levant. Journal Of the British School Of Archaeology In Jerusalem And The British Institute At Amman For Archaeology And History (London)

Mariner’s Mirror  The Mariner’s Mirror. Journal Of The Society For Nautical Research (London)

MDAIK  Mitteilungen des Deutschen Archäologischen Instituts, Abteilung Kairo (Mainz/Cairo/Berlin/Wiesbaden)

MDOG  Mitteilungen der Deutschen Orient-Gesellschaft zu Berlin (Berlin/Leipzig)

MIFAO  Mémoires publiés par les membres de l’Institut Français d’Archéologie Orientale du Caire (Berlin/Cairo)

MIO  Mitteilungen des Instituts für Orientforschung (Berlin)

NGWG  Nachrichten von der Gesellschaft der Wissenschaften zu Göttingen (Göttingen)

Occasional Papers  Occasional Papers On The Near East (Malibu)


PSBA  Proceedings Of The Society Of Biblical Archaeology (London)

RdE  Revue d’Égyptologie (Paris)

SAK  Studien zur Altägyptischen Kultur (Hamburg)

VA  Varia Aegyptiaca (San Antonio)

ZÄS  Zeitschrift für Ägyptische Sprache und Altertumskunde (Leipzig/Berlin)
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