

See discussions, stats, and author profiles for this publication at: <https://www.researchgate.net/publication/291891176>

The enigma of the pleated dress: New insights from Early Dynastic Helwan reliefs

Article in *The Journal of Egyptian Archaeology* · January 2014

CITATION

1

READS

1,527

1 author:



Jana Jones

Macquarie University

11 PUBLICATIONS 47 CITATIONS

SEE PROFILE

Some of the authors of this publication are also working on these related projects:



Mummy proteomics [View project](#)



'Secrets of the Ancient Egyptian embalmers: an archaeological, historical and scientific investigation of the origins and development of mummification'. [View project](#)

THE ENIGMA OF THE PLEATED DRESS: NEW INSIGHTS FROM EARLY DYNASTIC HELWAN RELIEFS*

By JANA JONES

Recent study of Early Dynastic funerary relief slabs (or stelae) from the Memphite necropolis at Helwan has uncovered new evidence that addresses long-standing issues regarding the horizontally pleated, long-sleeved V-necked dress. The dress appears with surprising frequency in the archaeological record, but until now was not known from Egyptian monuments. The iconographic evidence on Second Dynasty Helwan reliefs showing tomb owners wearing dresses with short, pleated sleeves redresses this lacuna and challenges the notion that the dress was restricted to low status burials at provincial sites. The study has revealed a marked anomaly between the Early Dynastic period and the Old and Middle Kingdoms in relation to the demographic distribution of the dress and status of the individuals. Furthermore, the Early Dynastic 'linen lists' show that the dress appears in large numbers amongst the textile offerings. New interpretations of the transliteration and writing of the 'dress' sign are offered.

جانا جونز

رؤى جديدة من نقوش أوائل الأسرات من حلوان لغز الرداء ذات الثنيات

يتناول هذا المقال تفسير و نطق صوتى و كتابة جديدة لعلامة "رداء"، حيث كشفت دراسة حديثة لألواح جنازية منقوشة من أوائل عصر الأسرات من جبانة منف بحلوان عن أدلة جديدة تتناول موضوع مطروح منذ فترة يخصص رداء ذات ثنيات، وأكمام يظهر هذا الرداء بتكرار مثير فى التسجيل الأثرى، لكنه لم يعرف من الآثار المصرية حتى V. طويلة ورقية على شكل حرف الان. تظهر نقوش الأسرة الثانية من حلوان أصحاب مقابر يرتدون رداء له أكمام قصيرة بثنيات، تعالج المقالة هذه الثغرة وترد على الرأى القائل أن هذا الرداء كان مقصورا على دفنات طبقات فقيرة بمواقع إقليمية. وكشفت الدراسة عن مفارقة واضحة بين فترة أوائل الأسرات والدولة القديمة والدولة الوسطى فيما يتعلق بالتوزيع السكانى للرداء والحالة الإجتماعية للأفراد، حيث تظهر "قوائم الكتان" من الأسرات المبكرة وجود الرداء بأعداد كبيرة ضمن قرابين المنسوجات

THE long-sleeved dress with horizontal pleats and a V-shaped opening at the neck has interested scholars and textile specialists since the dress type was first documented in the archaeological record.¹ Although a relatively large corpus of these dresses has survived,² it has been widely observed that the garment was not represented on Egyptian monuments.³

* My thanks to Christiana Köhler, Susanne Binder, Linda Evans and Karin Sowada for their valuable comments and to Stephen Quirke for permission to use Petrie Museum images. Artwork and other images as acknowledged; these may not be reproduced without permission. The hieroglyphs in this paper were produced using JSesh, an open source hieroglyphic editor. I owe a debt of gratitude to Rosalind Janssen who inspired me to study Ancient Egyptian textiles.

¹ W. M. F. Petrie, *Deshasheh 1897* (EEF 15; London, 1898), 31–2, fig. xxxv.148; E. G. Chassinat and C. Palanque, *Une campagne de fouilles dans la Nécropole d'Assiout* (Cairo, 1911), 162–4, pl. xxxiii; A. B. Kamal, 'Rapport sur les fouilles de Saïd Bey Khachaba au Déir-el-Gebraouï', (ASAE 13; Cairo, 1914), 168–71, fig. 21; E. Schiaparelli, 'La missione Italiana a Ghebelein' (ASAE 20; Cairo, 1921), 126–8 (1911 and 1920 excavations report); G. A. Reisner, *A Provincial Cemetery of the Pyramid Age: Naga-ed-Dêr III* (Oxford, 1932), 11–13 (publication of 1902–1903 excavation season).

² There are over 20 documented extant dresses. Excavators have reported at least the same number of complete and fragmented dresses (see n. 20, 21, 23).

The discrepancy between the archaeological record and the iconographic evidence has prompted discussion on issues such as symbolism versus realism in depictions of dress in Ancient Egyptian art,⁴ the development of the pleated dress,⁵ the geographical distribution of the garment and the social status of its owners.⁶

Recent studies of relief slabs with offering scenes from the Early Dynastic and early Old Kingdom Memphite cemetery at Helwan have provided new perspectives on the interpretation of this dress type.⁷ Examination of the iconography of the female tomb-owners has revealed the first, and only, recorded two-dimensional evidence for pleated, V-necked dresses as early as the Second Dynasty. Furthermore, five Second Dynasty reliefs include the hieroglyph denoting the dress in the inventory of textiles and clothing, or 'linen list'.⁸ It occurs as an ideogram, but also functions as a determinative in the earliest phonetic writing of the word *mꜣt*, a sleeved garment, or dress.⁹ Some errors in the transliteration and interpretation of the sign have been identified through close examination of the relevant reliefs.

The Helwan corpus of funerary relief slabs

The Helwan corpus of 48 known relief slabs (or 'stelae' as they are commonly described)¹⁰ is the largest group of early, securely provenanced inscribed material with offering scenes and the largest single source of early textile terminology. The Egyptian archaeologist Zaki Saad excavated 32 of the relief slabs between 1942 and 1954, during which time approximately 10,000 graves of the Memphite lower and 'middle' classes were uncovered. Only 25 of the relief slabs were published by Saad;¹¹ the remainder were documented by Peter Kaplony in 1966.¹² The location of the main body of the slabs was unknown until 1999, when they were found in the basement of the Egyptian Museum, Cairo, and subsequently copied and photographed by members of the Australian mission to Helwan. A number of complete slabs and fragments have been

³ Petrie, *Deshasheh*, 31; E. Riefstahl, 'A Note on Ancient Fashions: Four Early Egyptian Dresses in the Museum of Fine Arts, Boston', *BMB* lxxviii.354 (1970), 244; R. M. Hall, 'Two Linen Dresses from the Fifth Dynasty Site of Deshasheh now in the Petrie Museum of Egyptian Archaeology, University College London', *JEA* 67 (1981), 170; R. M. Hall and L. Pedrini, 'A Pleated Linen Dress from a Sixth Dynasty Tomb at Gebelein now in the Museo Egizio, Turin', *JEA* 70 (1984), 139; G. Robins, 'Problems in Interpreting Egyptian Art', *DE* 17 (1990), 45–6; G. Vogelsang-Eastwood, *Pharaonic Egyptian Clothing* (Leiden, 1993), 122.

⁴ Robins, *DE* 17, 54.

⁵ Riefstahl, *BMB* lxxviii.354, 248, 251; Hall and Pedrini, *JEA* 70, 139.

⁶ Riefstahl *BMB* lxxviii.354, 252; Hall and Pedrini, *JEA* 70, 139; R. M. Hall, 'Garments in the Petrie Museum of Egyptian Archaeology', *Textile History* 13.1 (1982), 34; J. R. Ogdon, 'Studies in Archaic Epigraphy VII: On the Long-Sleeved Dress Logogram and Its Phonetic Values', *GM* 68 (1983), 83.

⁷ E. C. Köhler and J. Jones, *Helwan II: The Early Dynastic and Old Kingdom Funerary Relief Slabs* (SAGA 25; Rahden, 2009).

⁸ Slab Nos EM99-4, EM99-5, EM99-18, EM99-23, EM99-30. See Köhler and Jones, *Helwan II*, 130–1, pl. 6; 132–3, pl. 7; 158–9, pl. 20; 168–9, pl. 25; 182–3, pl. 32.

⁹ Slab No. EM99-4 (late Second Dynasty). See Köhler and Jones, *Helwan II*, 130–1, pl. 6.

¹⁰ Köhler and Jones, *Helwan II*, 1. The authors avoid using the term 'stelae' following the definitions in the structural analysis by H. W. Müller, 'Die Totengedenksteine des Mittleren Reiches, ihre Genesis, ihre Darstellungen und ihre Komposition', *MDAIK* 4 (1933), 165–206. The Helwan relief slabs were not independent and freestanding installations, i.e. 'stelae', but most probably formed part of the architectural ensemble in the early tombs.

¹¹ Z. Y. Saad, *Ceiling Stelae in Second Dynasty Tombs from the Excavations at Helwan* (SASAE 21; Cairo, 1957).

¹² P. Kaplony, *Kleine Beiträge zu den Inschriften der ägyptischen Frühzeit* (Wiesbaden, 1966).

excavated since that time.¹³ A further two slabs were located in the Supreme Council of Antiquities (SCA) magazine at Atfih.¹⁴ Forty-one of the slabs are catalogued in Helwan II.¹⁵ The remainder will be published after excavations have been completed, and absolute statistical data have been determined.

Textiles and clothing on the Helwan relief slabs

The tomb owner on the Helwan slabs is depicted seated before an offering table, reaching toward the loaves of bread. He or she is surrounded by inventories of offerings that comprise provisions such as bread and other baked goods, meat and fowl, fruit and agricultural produce, beverages, cosmetics, oils, fats, incense and textiles. Less common inclusions are utilitarian objects such as tools, boxes, headrests and beds.

Of the 41 published relief slabs (dated from the First to early Fourth Dynasties), 31 contain a 'linen list'. Of these, eight include one or more different items of clothing in addition to the textiles. The clothing, such as dresses, cloaks, kilts and a so-called 'penis sheath', first appear in the mid-Second Dynasty and continue until the Third Dynasty.¹⁶ The textile inventories are positioned prominently, often at the head of the lists of offerings in the earlier reliefs, and occupy a sizeable part of the total iconography. In the Third and early Fourth Dynasties, they appear in an ordered, compartmentalised section, generally on the right hand side of the relief slab, resembling the linen lists on the Fourth Dynasty Giza slab stelae.¹⁷ Signs designating different qualities, dimensions and quantities of the textiles and clothing offered occur as early as the First Dynasty, gradually increasing in number and variety.¹⁸

Two of the Second Dynasty relief slabs depict the female tomb owners wearing V-necked dresses with short, pleated sleeves (Sep, EM99-12 and N(it).mah, EM99-5. See figs 1, 2). These reliefs represent the only two-dimensional iconographic evidence for pleated dresses known to us. The two slabs did not appear in the publication by Saad, but were among those subsequently studied by Kaplony. However, in his drawings Kaplony omitted the detail of the pleating.¹⁹ This significant feature only became evident decades later, when the slabs were sighted and copied in the basement of the Egyptian Museum, Cairo.

¹³ Under the direction of E. Christiana Köhler. Helwan was a Macquarie University (Sydney, Australia) project between 1997 and 2010. Since 2010 it has been a joint project between Macquarie University and the University of Vienna. The 2012 season was directed by Jana Jones. For details of discovery and archaeological context of the relief slabs, see Köhler and Jones, *Helwan II*, 3–15.

¹⁴ E. C. Köhler, pers. comm.

¹⁵ Köhler and Jones, *Helwan II*, 122–203; pls 1–45.

¹⁶ Slab Nos EM99-4, EM99-5, EM99-10; EM99-13, EM99-18, EM99-19, EM99-23, EM99-30. See Köhler and Jones, *Helwan II*, 130–1, pl. 6; 132–3, pl. 7; 142–3, pl. 12; 148–9, pl. 15; 158–9, pl. 20; 160–1, pl. 21; 168–9, pl. 25; 182–3, pl. 32. Textiles occur on three of the unpublished reliefs, without items of clothing.

¹⁷ P. Der Manuelian, *Slab Stelae of the Giza Necropolis* (New Haven, 2003). An earlier example of this arrangement at Helwan dated mid- to late Second Dynasty is fragmentary slab S99-5, which displays part of a mixed list headed by textile offerings. Köhler and Jones, *Helwan II*, 190–1, pl. 36.

¹⁸ For discussion of the problems associated with interpretation of size and quality of the textiles in the linen lists, see J. Jones, 'Some Observations on the Dimensions of Textiles in the Old Kingdom Linen Lists', in A. Woods, A. McFarlane, and S. Binder (eds), *Egyptian Culture and Society: Studies in Honour of Naguib Kanawati* (Cairo, 2010), 247–62; J. Jones, 'The "Linen List" in Early Dynastic and Old Kingdom Egypt: Text and Textile Reconciled', in M-L. B. Nosch and C. Michel (eds), *Textile Terminology in the 3rd and 2nd Millennia BC* (Oxford, 2010), 81–109.

¹⁹ Kaplony, *Kleine Beiträge*, figs 2.1092, 3.1093.

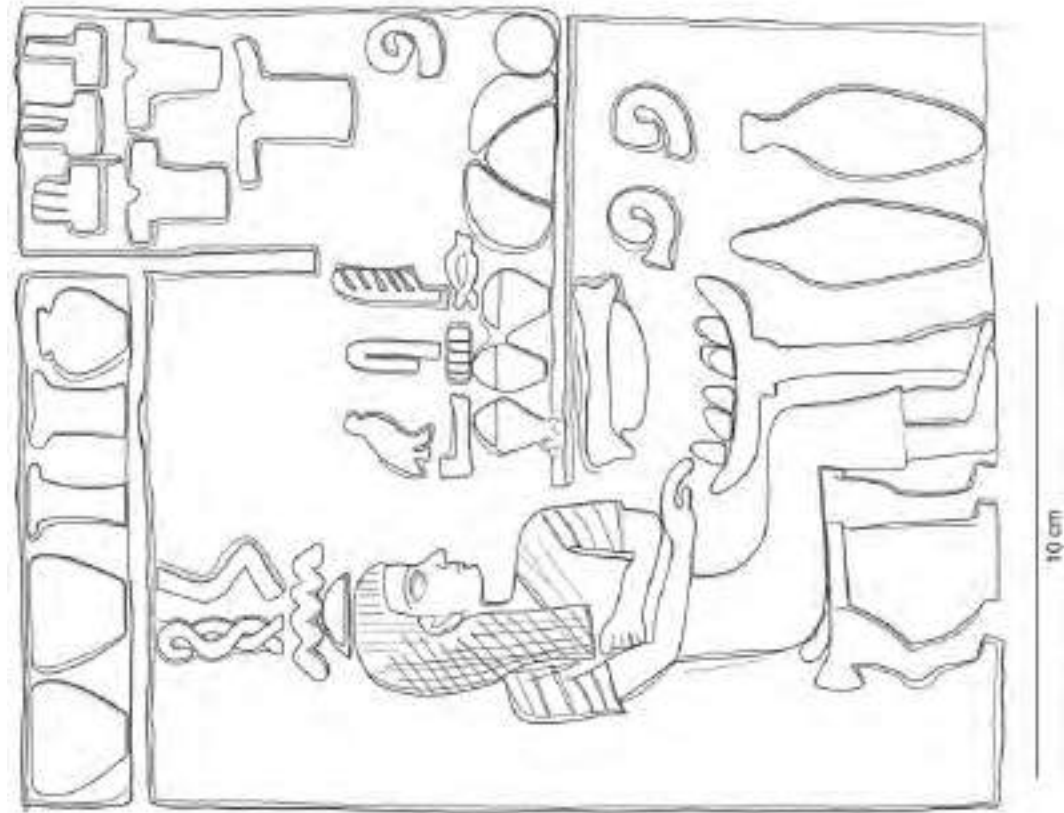


FIG. 2. N(it).mah, EM99-5. Mid-Second Dynasty
(Köhler and Jones, *Helwan II*, 133. Drawing: E. C. Köhler).

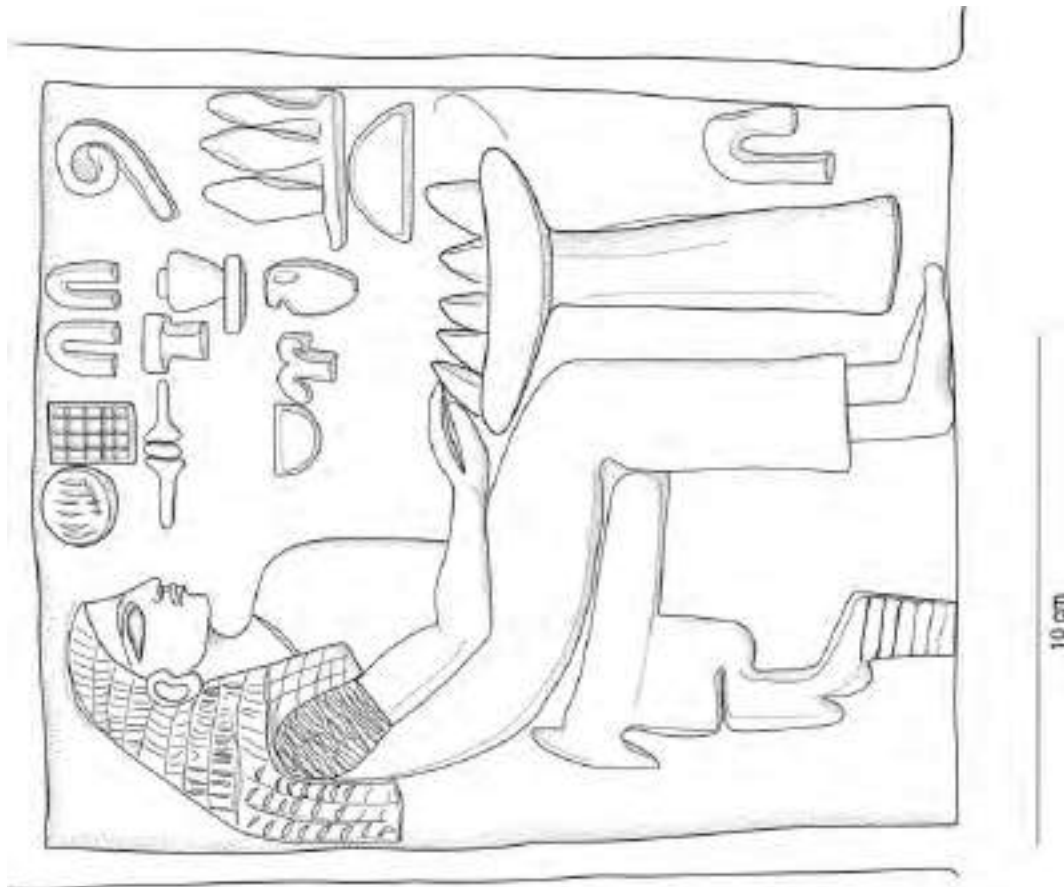


FIG. 1. Sep, EM99-12. Early to mid-Second Dynasty
(Köhler and Jones, *Helwan II*, 147. Drawing: E. C. Köhler).

The pleated, V-necked dress in the archaeological record

In addition to the extant dresses preserved in museums,²⁰ references to complete garments, fragments of garments and pleated ‘stuff’ in archaeological reports over the last century suggest that this dress style was not uncommon in graves from the First Dynasty to at least the Eleventh Dynasty, spanning a period of some one thousand years.²¹ It is possible that many more examples have not been included in reports because of the fragmentary nature of the material or early excavators’ indifference to textile finds.

Elizabeth Riefstahl examined four pleated dresses in the Boston Museum of Fine Arts collection²² from the Sixth Dynasty tomb N 94 excavated at Naga ed-Dêr in the 1902–3 season by Reisner.²³ She illustrated the construction of these garments as well as the similarly structured Fifth Dynasty dresses from Petrie’s excavations at Deshasheh, which at that time were known only from the excavation report.²⁴

Two of these Fifth Dynasty Deshasheh dresses were discovered in the storerooms of the Petrie Museum, University College London, by Rosalind Janssen (née Hall), who reported on them in a brief communication in 1981.²⁵ A First Dynasty dress from mastaba 2050 at Tarkhan was amongst the hoard of textiles from excavations by Petrie.²⁶ This surviving garment is particularly significant as a reference to depictions of pleated dresses on the two funerary relief slabs from Helwan.

It has been suggested that the linens from mastaba 2050 may not necessarily be contemporary with the tomb, but may date to the late Old Kingdom.²⁷ Radiocarbon dating was carried out in 1965²⁸ on associated linen from the mastaba, returning a First Dynasty historical date.²⁹ Yet analysis of the dress itself in 1978 (after conservation)

²⁰ See R. M. Hall, ‘“The Cast-Off Garment of Yesterday”: Dresses Reversed in Life and Death,’ *BIFAO* 85 (1985), table 1, for a list of 17 surviving and untraced pleated, sleeved dresses; see also Vogelsang-Eastwood, *Pharaonic Clothing*, 115–19, for measurements of eleven of these garments. An additional two dresses from El-Hawawish, dated late Sixth Dynasty, should be added to those documented by Hall and Vogelsang-Eastwood: A. McFarlane, ‘A Pleated Linen Dress from El-Hawawish,’ *BACE* 2 (1991), 75–80, pl. 15. A number of unpublished, pleated dresses from the German Archaeological Institute (DAIK) excavations of the Old Kingdom burials, located northwest of the Third Dynasty pyramid at Elephantine, are stored in the magazine at the site.

²¹ Petrie, *Deshasheh*, 31–2, noted that in addition to the nine dresses in one burial, masses of clothing were found in many of the tombs, including a finely pleated ‘kilt’, but details were not provided. Tomb 13 at Asyut contained ‘several’ dresses, but only one was salvageable (Louvre E 1026), Chassinat and Palanque, *Une campagne*, 162–4, pl. xxxiii. A pleated ‘half dress’ laid over a body in an Eleventh Dynasty tomb was reported at Saqqara by P. Munro, ‘Der Unas-Friedhof Nord-West 4./5: Vorbericht über die Arbeiten der Gruppe Hannover/Berlin in Saqqara’, *GM* 63 (1983), 102–3. It is not known whether it had sleeves. McFarlane, *BACE* 2, 75, noted that many fragments of pleated linen with seams and stitching would suggest that similar dresses were included in the graves of other females at the site.

²² Riefstahl, *BMB* lxxviii.354, 244–59.

²³ Reisner, *Naga-ed-Dêr* III, 11–13. Twelve similar garments were in the grave.

²⁴ Petrie, *Deshasheh*, 31–2, pl. xxxv.148.

²⁵ Hall, *JEA* 67, 168–71.

²⁶ UC 28614B1. W. M. F. Petrie, *Tarkhan* II (London, 1914), 10; Hall, *JEA* 67, 170; S. Landi and R. M. Hall, ‘The Discovery and Conservation of an Ancient Egyptian Linen Tunic’, *Studies in Conservation* 24.4 (1979), 141–52; Hall, *Textile History* 13.1 (1982), 27–45.

²⁷ Hall, *Textile History* 13.1, 29; S. Quirke, pers. comm.

²⁸ W. J. Callow, M. J. Baker, and G. I. Hassall, ‘National Physical Laboratory Radiocarbon Measurements IV’, *Radiocarbon* 8 (1966), 340–7.

²⁹ The linen was found in association with objects ‘clearly of an Archaic date’. Landi and Hall, *Studies in Conservation* 24.4, 141.

returned a Fifth Dynasty date.³⁰ The probability that modern contamination was introduced during cleaning and conservation cannot be discounted. Furthermore, these were early analyses and much progress has been made in radiocarbon dating methods.³¹ Only re-dating the dress after removal of any conservation materials and using sufficient material to give a safe C14 date would resolve this question (S. Buckley, pers. comm.). For these reasons the writer accepts the earlier date, particularly in view of the iconographic evidence that supports the occurrence of the dress type in the Early Dynastic period.

Construction of the pleated, V-necked dress with long sleeves

The construction of the Naga ed-Dêr and Deshasheh garments has been described in detail by Riefstahl and Hall,³² who also recorded the conservation process of the First Dynasty Tarkhan dress in the Petrie Museum.³³ The dresses were cut to a very similar pattern, with only slight variations. The main differences lay in the shape of the sleeves, the technique and placement of the pleating, the quality and weave of the linen, and in the case of the Deshasheh dresses, the extreme length of the skirt.

The dresses from Naga ed-Dêr are all similar in style and size, suggesting that they were made to fit the owner. They were constructed from three separate sections: two pieces comprised the left and right sides of the bodice and sleeves, and one fringed

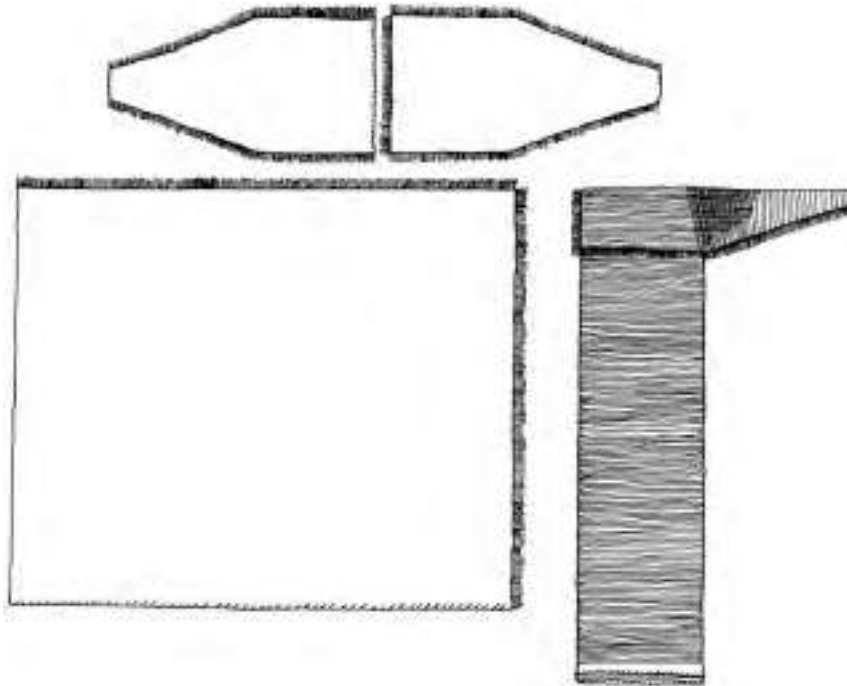


FIG. 3. Pattern of the pleated, V-necked dress from Naga ed-Dêr (Mary Hartley, after Riefstahl, *BMB* lxxviii.354, 248 fig. 6).

³⁰ R. Burleigh, K. Matthews, and J. Ambers, 'British Museum Natural Radiocarbon Measurements XIV', *Radiocarbon* 24.3 (1982), 229-61.

³¹ Landi and Hall noted that destruction of a sample 'the size of a pocket handkerchief' was necessary for the initial radiocarbon analysis of the associated linens. Landi and Hall, *Studies in Conservation* 24.4, 141.

³² Riefstahl, *BMB* lxxviii.354, 246-50; figs 1, 6; Hall, *Textile History* 13.1, 30-2. Construction of a dress from Asyut (Louvre E 12026) is illustrated in Hall, *BIFAO* 85, 236-8.

³³ Landi and Hall, *Studies in Conservation* 24.4, 141-52.

rectangle made up the skirt. The two halves of the bodice with sleeves were sewn onto the skirt, meeting to form a 'V' opening at the centre front and back. The opening was fringed on one side and closed with ties made from plied yarn. The sleeves tapered toward the wrist and were edged with a narrow weft fringe on the underarm seam. Each yoke or half section of the bodice was pleated horizontally with very tight, even, narrow accordion pleats. The sleeves were re-pleated vertically from the shoulder to the wrist, forming a decorative herringbone pattern (figs 3, 4). The horizontal pleats on the skirt were stitched at the side seams, which would have facilitated the re-pleating of the garment during laundering and prevented the pleats from sagging during wear.³⁴ A feature of this dress type was the folding over of the garment vertically from the neckline to the hem before pleating. When the garment was unfolded, there was a vertical crease in the centre front and back. One half of the horizontal pleats opened upward and the other half opened downward³⁵ (see fig. 4).



FIG. 4. Pleated V-necked dress, Naga ed-Dêr, Sixth Dynasty (u 34.56, courtesy of the *BMFA*). Note that the dress is inside out.

³⁴ The pleats had not been stitched into the seams of the two dresses of similar date and construction from El-Hawawish. See McFarlane, *BACE* 2, 76.

³⁵ First reported by Riefstahl, *BMB* lxxviii.354, 247; Hall and Pedrini, *JEA* 70, 138; Vogelsang-Eastwood, *Pharaonic Clothing*, 121.

The two surviving Fifth Dynasty garments from Deshasheh were among the nine ‘shirts’ that were found piled on top of the female body inside a wooden coffin.³⁶ Although the basic cut of the dresses is similar to the other garments in this corpus, neither skirt was pleated horizontally. The narrowness and extreme length of the skirts has led to suggestions that the garments were made specifically for the grave.³⁷ The linen fabric of the finer of the two dresses (UC 31183) was woven with alternating groups of thicker and thinner warp yarns (i.e., the vertically placed yarns). After washing and drying, the fibres would shrink and cause the fabric to ‘crimp’ into fluted folds or corrugations, giving the impression of fine, irregular, vertical pleats. This effect is especially noticeable on the bodice and on the one surviving sleeve, but to a lesser extent on the skirt, where they had been flattened during burial or subsequent storage.³⁸ The vertical ‘pleats’ on the bodice extend across the width of the sleeves, giving the effect of horizontally placed pleats when worn (fig. 5). Weaver Ann Richards has demonstrated that the technique of ‘cramming and spacing’, that is, placing of the warp yarn in groups at regular intervals to form stripes, gives this ‘crimped’ effect when wetted.³⁹

The First Dynasty Tarkhan dress differs from the Naga ed-Dêr garments in that only the bodice and the sleeves were pleated. The fine, horizontal pleats on the bodice continue to the wrists. There is no evidence to suggest that the skirt was ever pleated. The length is impossible to gauge because the lower part is missing. Like the Naga ed-Dêr garments, the skirt was sewn from one piece of material that was joined from selvedge to selvedge along the left side, with a decorative fringe on that side. A ‘stubbed yarn’ in the weave resulted in an irregular grey stripe in the warp. Creasing observed around the armpits and elbows suggests that the Tarkhan garment had been worn in life⁴⁰ (see fig. 6).

Hall noted that the Tarkhan garment was inside out when found.⁴¹ Subsequently she examined other sleeved dresses and concluded that this was a deliberate action in the context of the funerary ritual, reflecting religious practice.⁴² An alternative explanation is that most of the dresses had been laundered prior to burial, and, as Hall surmised, were turned inside out for pleating before being stored in chests.⁴³

Development of the dress style

Both Riefstahl and Hall considered the long-sleeved, pleated dress type to be a ‘logical development’ from the sleeveless, Old Kingdom V-necked ‘sheath’ dress, as

³⁶ UC 31182 and UC 31183. Hall, *Textile History* 13.1, 32; n. 16. Petrie’s account of the discovery is given in an unpublished journal.

³⁷ Riefstahl, *BMB* lxxviii.354, 250; Hall, *Textile History* 13.1, 33. The skirt of UC 31182 is 142 cm long and 38 cm wide; UC 31183 is 156 cm long and 47 cm wide. W. Stevenson Smith, ‘The Old Kingdom Linen-List’, *ZÄS* 71 (1935), 138, suggested that pleating had been intended. The writer agrees with Vogelsang-Eastwood, who compared the measurements of 11 extant garments and observed that the Deshasheh dresses were ‘not significantly narrow’. See Vogelsang-Eastwood, *Pharaonic Clothing*, 123, table 1; 125; pl. 27.

³⁸ R. Hall, ‘“Crimpled” Garments: A Mode of Dinner Dress’, *DE* 5 (1986), 37–45. See also Hall, *Textile History* 13.1, fig. 9 for detail of weave, and Vogelsang-Eastwood, *Pharaonic Clothing*, 113–15.

³⁹ A. Richards, ‘Did Ancient Egyptian Textiles Pleat Themselves?’, in C. Graves-Brown and K. Szpakowska (eds), *Experiment and Experience: Ancient Egypt in the Present* (in press, Classical Press of Wales).

⁴⁰ Landi and Hall, *Studies in Conservation* 24.4, 143–6; R. M. Hall, ‘The Pharaonic *mss* Tunic as a Smock’, *GM* 43 (1981), 34; Hall, *Textile History* 13.1, 30.

⁴¹ Hall, *GM* 43, 34.

⁴² Hall, *BIFAO* 85, 235–41, table 1; pl. xxxviii.

⁴³ Hall, *BIFAO* 85, 239; n. 1.



FIG. 5. 'Crimpled' dress, Deshasheh, Fifth Dynasty (UC 31183, courtesy of the Petrie Museum, University College London).



FIG. 6. Tarkhan dress, First Dynasty (UC 28614 B1, courtesy of the Petrie Museum, University College London).

depicted on the monuments.⁴⁴ Yet at the time of publication in 1984, Hall had already documented the First Dynasty, long-sleeved Tarkhan dress, which ostensibly predates Old Kingdom depictions.⁴⁵

It is a paradox that the sleeveless, figure-hugging sheath dress with a deep 'V' neckline is freely depicted in sculpture and wall painting from the Old Kingdom onward,⁴⁶ yet, despite the large quantities of textiles in Old and Middle Kingdom burials, the material evidence is restricted to one, single occurrence. A carefully modelled, Fourth Dynasty mummy from the Western Cemetery at Giza was covered in the classic sleeveless dress when excavated.⁴⁷ The garment was destroyed during examination of the mummy, and neither the excavation photograph nor the report clarifies whether the garment was

⁴⁴ Riefstahl, *BMB* lxxviii.354, 248, 251; Hall and Pedrini, *JEA* 70, 139. The dress is referred to as a 'sheath' because it is depicted as being very tightly fitted to the body, defining the erotic zones of stomach, pubic triangle, buttocks and thighs.

⁴⁵ Landi and Hall, *Studies in Conservation* 24.4, 141–52; Hall, *JEA* 67, 170.

⁴⁶ The sheath dress continued to be depicted until the early New Kingdom. After the mid-Eighteenth Dynasty it was superseded by the voluminous, pleated transparent gowns typically identified with the New Kingdom. However, it continued to be depicted as the dress of goddesses.

⁴⁷ G 2220 (Shaft B). G. Reisner, *A History of the Giza Necropolis I* (Cambridge, MA, 1942), 451–2, pl. xlii. Some 40 layers of textile were in the coffin. See also Vogelsang-Eastwood, *Pharaonic Clothing*, 111–12; pl. 25.

simply a 'cut-out' laid over the body, or an entire dress. A possible explanation for this dearth of material evidence is the theory that the Old Kingdom dress was composed of two pieces: a rectangular piece of textile wrapped around the body underneath the breasts, supported by separate shoulder straps that formed a 'V' neckline.⁴⁸ To date, shoulder straps have not been identified in burial contexts. The above-mentioned Giza garment was cut as one piece, without straps. It should be noted that a sleeveless, V-necked sheath dress with either pleating or 'crimping' is represented on monuments, but again, no such dresses have been reported in the archaeological record.⁴⁹

Examination of the female dress styles represented on the Helwan reliefs shows that it is highly probable that the sleeved, horizontally pleated V-necked dress and the V-necked, sleeveless sheath dress were contemporaneous during the Early Dynastic period (table 1). Despite damage and loss of detail that originally would have been overlaid in paint, deductions regarding the garments depicted can be made from observation of the position of the arms.

In the most common attitude, the tomb owner reaches toward the bread on the offering table with the right hand, while the left arm is angled across the chest. This position suggests that the figure is clothed in a rectangular cloak that covers the left shoulder and arm and wraps under the opposite armpit and around the body, leaving bare the right shoulder and extended right arm. Of the 19 female tomb owners, 12 are depicted in this pose.⁵⁰ A clenched left fist often protrudes from beneath the cloak.⁵¹ The left arm and shoulder are completely covered in five reliefs.⁵² In three of these, the left hand is concealed beneath the cloak.⁵³ This includes one of the two reliefs on which the pleated dress occurs, where a short, pleated sleeve is depicted on the outstretched right arm (fig. 1). In the other, slightly later relief slab both pleated sleeves and the

⁴⁸ Riefstahl, *BMB* lxxviii.354, 246; E. Needler, 'Three Pieces of Unpatterned Linen from Ancient Egypt in the Royal Ontario Museum', in V. Gervers (ed.), *Studies in Textile History* (Ontario, 1977), 243; Vogelsang-Eastwood, *Pharaonic Clothing*, 95–106.

⁴⁹ JE 48828 (Egyptian Museum, Cairo) is an example in the round of a sheath dress worn under a cloak, both displaying fine, herringbone pleats. See K. H. Dittman, 'Eine Mantelstatue aus der Zeit der 4. Dynastie', *MDAIK* (1939), 8.2, 165–70, figs 24–5. The wife of Ti is depicted wearing a sheath dress with wavy, horizontal lines that suggest 'crimping', in H. Wild, *La tombe de Ti: La chapelle*, Vol. III (Cairo, 1966), pl. CLXIV. See also Vogelsang-Eastwood, *Pharaonic Clothing*, 112–15, and references.

⁵⁰ Table 1. Slab Nos EM99-2, EM99-4, EM99-5, EM99-11, EM99-12, EM99-18, EM99-22, EM99-23, EM99-27, EM99-30, S01-36, S05-135. The owner of slab EM 99-23 has been included in table 1 as female by this writer, although an alternative identification as male has been proposed (Köhler and Jones, *Helwan* II, 168–9). The owner's title could be read as *s3.t nsw*, 'daughter of the king', as well as *s3 nsw*, 'son of the king', the *t* serving for the writing of *nsw* and *s3.t*, or just *nsw*. However, names with the goddess Hekat seem to belong to females, so the feminine name could be read as *N.y-s(y)-hk(3).t*, 'She belongs to Hekat'. The alternative reading would be the masculine name *N.y-sw-hk(3).t*, 'He belongs to Hekat'. My sincere thanks to Boyo Ockinga for this observation.

⁵¹ The hand position of the tomb owners on the Helwan reliefs is different from those on the Fourth Dynasty slab stelae from Giza. The females at Helwan are depicted with clenched fists, whilst at Giza only the males clench the fist while grasping the shoulder knot. Manuelian, *Slab Stelae*, 1–2, pls 2–3; 4–5, pls 3–4; 6–7, pls 5–6; 8–9, pls 7–8; 16–17, pls 15–16; 18–19, pls 17–18; 26–7, pls 25–6. The Giza females are depicted with open palms. Manuelian, *Slab Stelae*, 12–13, pls 11–12; 14–15, pls 13–14; 24–5, pls 23–4. Where visible, the majority of males on the Helwan reliefs clench the fists, but five are shown with an open palm: EM97-43, EM99-7, EM99-24, EM99-28, EM99-35. Köhler and Jones, *Helwan* II, 122–3, pl. 2; 136–7, pl. 9; 170–1, pl. 26; 178–9, pl. 30; 188–9, pl. 35. They date to the Second Dynasty, apart from EM97-43, which is dated Third Dynasty. (Note: The female on EM99-2 appears to have an open palm in the drawing, but inspection of the photograph shows that this is probably a damaged section).

⁵² Table 1. Slab Nos EM99-12, EM99-18, EM99-23, EM99-27, S01-36.

⁵³ Slab Nos. EM99-12, EM99-23, S01-36. Köhler and Jones, *Helwan* II, 146–7, pl. 14; 168–9, pl. 25; 192–3, pl. 37.

TABLE I Female dress styles depicted on the Early Dynastic relief slabs from Helwan

Relief No.	Relative Date	Both arms exposed	Left arm angled across body	Left arm covered	Left arm angled, not covered*	Both arms out-stretched**	Pleated sleeve(s)	'Dress' hieroglyph	Comment	Reference
EM99-2	E. 2 nd Dyn.	X	X	X					Gap between arm and breast in profile. Garment not clear	126-7
EM99-4	L. 2 nd Dyn.	X	X	X				<i>mꜣ</i> (phonetic) x 20	Space between left arm and breast is very deeply carved.	146-7
EM99-5	M. 2 nd Dyn.	X	X	X		X	X	ideogram x 3 (or x 300?)	Dress, with bodice and both sleeves pleated. Left arm with clenched fist angled across body. Cloak not worn.	132-3
EM99-8	M.-L. 1 st Dyn.								Unclear, figure damaged. Arms not visible.	138-9
EM99-10	E.-M. 2 nd Dyn.	X			X				Outstretched arms position suggests cloak not worn. Garment not clear.	142-3
EM99-11	E. 2 nd Dyn.	X	X	X					Large gap between left arm and body. Garment not clear.	144-5
EM99-12	E.-M. 2 nd Dyn.	X	X	X		X	X		Fringed cloak, exposing one pleated sleeve. Left hand not visible.	146-7
EM99-14	L. 1 st -E. 2 nd Dyn.								One outstretched, bare arm, in profile. Garment not clear.	150-1

TABLE 1 (cont.) Female dress styles depicted on the Early Dynastic relief slabs from Hehuan

Relief No.	Relative Date	Both arms exposed	Left arm angled across body	Left arm covered	Left arm angled, not covered	Both arms out-stretched**	Pleated sleeve(s)	'Dress' hieroglyph	Comment	Reference
EM99-15	M. 2 nd Dyn.	X				X			Outstretched arms position suggests cloak not worn. Left breast in profile.	152-3 <i>Hehuan II</i>
EM99-18	M.-L. 2 nd Dyn.		X	X				ideogram x 1; x 10	Clenched left fist protrudes from beneath cloak.	158-9
EM99-21	M. 2 nd Dyn.	X				X			Outstretched arms position suggests cloak not worn. Faint line on bare right arm shows possible damage.	164-5
EM99-22	M. 2 nd Dyn.	X							Small gap between left arm and breast. Garment not clear. Lower calves separated, suggesting end of a garment.	166-7
EM 99-23	M. 2 nd Dyn.		X	X				ideogram x 40	40 dresses, <i>idmy/iti.wy</i> quality. Left hand not visible.	168-9
EM99-25	L. 1 st -E. 2 nd Dyn.								One bare, outstretched arm in profile. Garment not clear.	172-3
EM99-26	M. 2 nd Dyn.								Arms position and garment unclear. Possibly one arm outstretched?	174-5

TABLE I (cont.) Female dress styles depicted on the Early Dynastic relief slabs from Helwan

Relief No.	Relative Date	Both arms exposed	Left arm angled across body	Left arm covered	Left arm angled, not covered*	Both arms out-stretched**	Pleated sleeve(s)	'Dress' hieroglyph	Comment	Reference
EM99-27	L. 1 st Dyn.		X	X					Clenched fist protruding from cloak? No space between arm and body.	176-7 <i>Helwan II</i>
EM99-30	2 nd Dyn.	X	X					ideogram x 100	Profile of left breast visible. No space between arm and body.	182-3
So1-36	M. 2 nd Dyn.		X	X					Covered left arm suggests cloak worn. No space between arm and body. Left hand not visible.	192-3
So5-135	L. 2 nd Dyn.	X?	X	X?	X?				Grasps shoulder knot? Lappets of hair/wig part to expose a bare right shoulder. (Compare cloak SQ 2146E).	200-1

* The outline of the angled arm and chest is very deeply carved in these examples, but there is reason to believe that white paint had been applied over the relief to illustrate the cloak. Compare the Giza slab stelae where the paint has remained, and the carved separation between arm and chest/breast is clearly defined beneath the applied paint. e.g., Iunu G 4150; Nefret-iabet G 1225. (Manuelian, *Slab Stelae*, 2-3 pls 1-2; 26-27 pls 25-6; 12-13 pls 11-12).

** Both arms bare and outstretched imply that in all probability a dress worn without a cloak was being depicted.

pleated bodice are shown. There, even though the figure is not wearing a cloak, the left arm is in the angled position with clenched fist on the chest (fig. 2).

In four, possibly five of these twelve slabs the arm angled across the body is carved in relief, but there is no visible trace of a garment.⁵⁴ Although the outline of the arm and chest is deeply carved and there is a distinct gap between them, it is reasonable to assume that white paint would have been overlaid to portray the cloak, by analogy with the Fourth Dynasty Giza slab stelae. Where the painted surface has remained on the Giza stelae, the carved separation between the arm and chest or breast is clearly defined beneath the applied paint.⁵⁵ Therefore it can be postulated that all twelve figures in this recurring pose on the Helwan reliefs are wearing the sleeveless, narrow, Old Kingdom-style sheath dress beneath a cloak.

Three of the female figures are depicted with both arms bare and reaching for the offering table. This attitude implies that they could not have been portrayed wearing a cloak.⁵⁶ No details of the garments survive, but in one example a small breast in profile is visible at the left armpit. This may suggest that the figure was rendered wearing the classic sheath dress described above, with the breast exposed according to convention.⁵⁷ In the Saad publication of another Helwan stela (EM99-2), the outline of a strap is shown on the left shoulder in the drawing, but the plate also suffers from heavy erosion in that area.⁵⁸ This detail was not evident when the relief was re-examined. The figure may also show a small breast in profile.

Although there is no irrefutable evidence for the depiction of shoulder straps, the position of the arms suggests that of the 19 female tomb owners, certainly 12, possibly 15 would have been wearing the garment that becomes codified as the classic female dress on monuments of the Old Kingdom. Therefore it can be posited that both dress types were contemporary during the First and Second Dynasties, and that the pleated dress did not evolve from the Old Kingdom sleeveless sheath.

Relating surviving garments to the iconography

Although caution should be exercised in the literal interpretation of Egyptian art, studies show that the Ancient Egyptian artist was an astute observer, recording essential detail with accuracy within the tenets of the Egyptian system of representation.⁵⁹ With this in mind, the depictions of the Helwan pleated dresses were examined in an attempt to identify the techniques of construction and the style of pleating represented.

The style of the Helwan dresses is similar to the extant corpus of pleated, V-necked dresses, apart from the length of the sleeves. The funerary slab of Sep is painstakingly carved in the most elaborate of the three relief styles employed at Helwan (fig. 1). This style is characterised by the use of volume and plasticity to create a three-dimensional

⁵⁴ Table 1. Slab Nos EM99-2, EM99-4, EM99-11, EM99-22, So5-135(?).

⁵⁵ For example, Wepemnefret G 1201; Iunu G 4150; Nefret-iabet G 1225. Manuelian, *Slab Stelae*, 2-3, pls 1-2; 26-7, pls 25-6; 12-3, pls 11-12.

⁵⁶ Table 1. Slab Nos EM99-10, EM99-15, EM99-21.

⁵⁷ Slab No. EM99-15. Köhler and Jones, *Helwan II*, 152-3, pl. 17. Compare Nefer, G 1207 in Manuelian, *Slab Stelae*, 8-9, pls 7-8.

⁵⁸ Saad, *Ceiling Stelae*, fig. 7, pl. 6.

⁵⁹ e.g., H. Schäfer, *Principles of Egyptian Art* (Oxford, 1986), 34, 43, 46, 47, 424 and more; L. Evans, *Animal Behaviour in Egyptian Art: Representations of the Natural World in Memphite Tomb Scenes* (Oxford, 2010), 6-7. Evans studied 8000 images from tomb paintings and compared them to the natural forms.

effect.⁶⁰ The expressive facial features are carved in much detail, and the intricate braiding and sectioning of individual strands of hair in the elaborate tripartite wig is carefully rendered. Therefore it is reasonable to assume that the elements of the pleating style also should be reproduced faithfully, and follow the same 'realistic' interpretation.

Having said that, deconstructing the pleating technique represented is not straightforward. The short sleeve has narrow, horizontally placed, uneven pleats that are broken up at irregular intervals by vertical folds. The pleats have been deeply carved and moulded, thus discounting the flat, knife-edged accordion pleating. Several techniques are possible: freehand 'pinching' of the pleats into shape, vertical re-pleating of horizontal pleats as on the Naga ed-Dêr dresses, or crimpling, which results in the fluted convolutions described by Hall in relation to the finer Deshasheh dress.⁶¹ Although the pleats on the sleeve of the Tarkhan dress are placed vertically not horizontally, if they were to be represented two-dimensionally the depiction would be very similar to the detail on the sleeve of Sep. The direction of the pleating on the bodice of the extant dresses assists in determining how the pleats 'sit' on the sleeves, but the cloak worn by Sep obscures that feature.

This two-dimensional representation from Helwan most closely parallels the First to Second Dynasty Louvre figurine of a female also wrapped in a fringed cloak, revealing the right arm and one short, pleated sleeve (fig. 7).⁶² A herringbone effect, like that on the sleeves of the Naga ed-Dêr dresses, has been achieved three-dimensionally by carving the horizontal pleats in a 'zigzag' pattern.⁶³ The pleating continues on the bodice, visible on the back of the figurine where it is not obscured by the cloak or hair. The neckline of the dress has a deep 'V'. The left arm is angled across the breast and hidden beneath the cloak, in the same attitude as that of Sep.⁶⁴

The dress represented on the relief of N(i)t-mah is rendered more schematically, but it shows the essential details: two short sleeves, a V-shaped neckline, pleats on the bodice and sleeves (fig. 2). The slab is worked in flat, raised relief, with pleating indicated by incised lines that are suggestive of widely spaced, knife-edged accordion pleats.⁶⁵ The bodice and both sleeves are pleated in the same direction, unlike surviving examples. This raises the question whether the artist simply intended to indicate the presence of pleats and was not striving for realistic representation, or whether the direction of the pleats was indeed represented accurately. Consequently, the existing iconographic evidence does not allow further analysis of the pleating technique. It is interesting, however, to note that pleating below the bodice is not shown, in this resembling the Tarkhan dress discussed above.

⁶⁰ Relief Style 3. See Köhler and Jones, *Helwan II*, 20-1, pls 43.5-7.

⁶¹ Hall, *DE* 5, 39.

⁶² Louvre E11888. Ivory, 13.5 cm. Dittman, *MDAIK* 8.2, 169, pl. 26a; C. Ziegler, *Egyptian Antiquities* (Paris, 1990), 19. The provenance has been incorrectly attributed to Abu Roash. A misreading of the entry in the second edition of B. Porter and R. Moss, *The Topographical Bibliography of Ancient Egyptian Hieroglyphic Texts, Reliefs and Paintings. Memphis. Abû Rawâsh to Abûsîr III.1* (Oxford, 1974), 9, has led to this error. A search of the museum inventory showed conclusively that the object was not amongst the finds from the excavations by Pierre Montet at Abu Roash, but was purchased in 1926. The exact find context is unknown. (Thanks to Y. Tristant, pers. comm.). Stylistically the figure belongs to the Early Dynastic period.

⁶³ See Dittman, *MDAIK* 8.2, 167, fig. 1 for sketch of the 'zigzag' effect obtained by re-pleating horizontal pleats in the opposite direction.

⁶⁴ Examination of the photograph of Sep shows that the edge of the cloak is fringed, a detail inadvertently omitted in the published drawing. Köhler and Jones, *Helwan II*, pl. 14.

⁶⁵ Relief Style 2. See Köhler and Jones, *Helwan II*, 20-1, pl. 43.4.

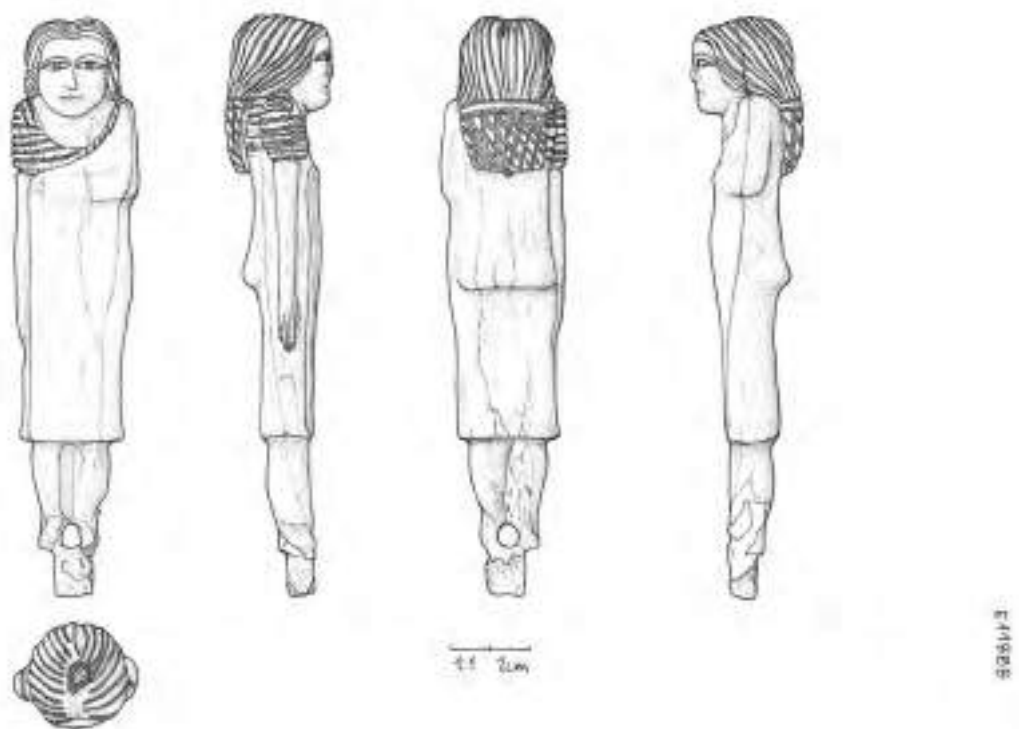


FIG. 7. Ivory figurine, First - Second Dynasty
(Louvre E11888. Jane Smythe, courtesy of the Institut Français d'Archéologie Orientale).

There are a number of theories on pleating techniques that propose the use of chemical fixatives, 'pleating boards' and other mechanical means.⁶⁶ As yet there is no consensus. Experiments by the author have shown that a combination of water, manipulation by hand and rapid drying is very effective in pleating linen. Moreover, one of the Sixth Dynasty dresses from the Reisner excavations at Naga ed-Dêr, on display in the Egyptian Museum in Cairo, shows evidence of 'pressing'. The bodice bears a clear imprint of the twisted ties that closed the neck opening. This could only have occurred when the dress was folded vertically after laundering and heavy pressure applied to fix in place the fine, tight pleats.⁶⁷ Depictions of complex pleating styles suggest that it is plausible that a stiffening agent may have been applied.⁶⁸ To date no scientific analyses have been carried out to identify the source of chemical compounds that may have been used in the process.⁶⁹

⁶⁶ E. Staehelin, *Untersuchungen zur ägyptischen Tracht im Alten Reich* (Berlin, 1966), 15; Riefstahl, *BMB* lxxviii.354, 249-50; E. Riefstahl, 'An Additional Footnote on Pleating in Ancient Egypt', *ARCE Newsletter* 92 (1975), 28-9; R. Hall, *Egyptian Textiles* (Aylesbury, 1986), 52; G. Vogelsang-Eastwood, 'Textiles', in P. T. Nicholson and I. Shaw (eds), *Ancient Egyptian Materials and Technology* (Cambridge, 2000), 281. Successful experiments in pleating by hand have been carried out by J. M. Johnstone, 'Practical Dressmaking for Ancient Egyptians: Making and Pleating Replica Ancient Egyptian Clothing', in C. Graves-Brown and K. Szpakowska (eds), *Experiment and Experience: Ancient Egypt in the Present* (in press, Classical Press of Wales).

⁶⁷ JE 88144, Egyptian Museum Cairo, P. Corr. 39. It was not possible to open the vitrine for close examination. The pleating is approx. 4 mm wide and significantly tighter and finer than that of two other pleated garments examined (JE 88145/SR 4636; JE 64815/SR4595).




⁶⁸ For example, the diagonally pleated triangular panel on the kilt in reliefs depicting Sahure: L. Borchardt, *Das Grabdenkmal des Königs SaAhu-Rea II* (Leipzig, 1913), pls 27, 39, 40.

⁶⁹ Research on the possible use of fixatives is proposed in collaboration with archaeological chemist Stephen

The linen list on the relief of N(i)t-mah contains three ‘dress’ ideograms (fig. 2). The two in the upper row have shorter sleeves than the one below. It is impossible to determine whether two styles of dress were intended, or whether the writing of the signs was governed by the available space.

Epigraphy and interpretation of the ideogram denoting the long-sleeved dress

William Stevenson Smith was the first to relate the form of the dresses from the Naga ed-Dêr and Deshasheh excavations⁷⁰ to the ideographic writing of the ‘dress’ sign in the linen list on the Second Dynasty stela of Sehefner (SQ 2146E) from Saqqara (fig. 8).⁷¹ The palaeography of the ‘dress’ hieroglyph on the Saqqara stela differs from those on the Helwan reliefs, where the V-shaped neckline is always shown.

The sign appears four times in the fifth register as determinative to signs in the register above. Smith tentatively identified the sign group  *tîw* that appears twice with *irtîw* as meaning a ‘sleeved garment made out of blue linen’.⁷² Junker⁷³ and Kaplony⁷⁴ had read the neighbouring sign  as *w3d*, ‘Hemd aus grünem Leinen’, ‘a green linen dress’, since it was influenced by the juxtaposition with *irtîw*. In a completely different interpretation, Elmar Edel has shown that the sign *tîw* should be read as *iti.wy*, ‘der königliche (Stoff)’.⁷⁵ This would make *w3d* an implausible reading for the sign group; Kahl suggested that perhaps it should be read as *d3.t*.⁷⁶ Yet the arrow  denoting *šsr*⁷⁷ quality is written directly above one of the sign groups, *tîw*, in the fourth register. It is puzzling that a superior quality, ‘royal linen’ should be qualified by a lesser quality, *šsr*. However, it should be noted that *sšr/šsr nsw.t* originally appears to have had royal connotations.⁷⁸ The quantities offered are 200, 400 and 1000.

The other sign determined by the sleeved garment appears to be the hieroglyph that usually represents the upright ‘forked’ or ‘inverted V’ fringe.⁷⁹ In the context of the linen list, the sign represents linear measurements: one fringe would be interpreted as a textile measuring 1 cubit wide by 10 cubits long.⁸⁰ In this context the reading is incongruous, and another interpretation should be sought. A cautionary note put

Buckley, BioArCh, Departments of Archaeology, Biology and Chemistry and Department of Archaeology, University of York.

⁷⁰ Smith, *ZÄS* 71, 134–49; Reisner, *Naga-ed-Dêr* III, 11–13; Petrie, *Deshasheh*, 31, pl. xxxv.148.

⁷¹ J. E. Quibell, *Archaic Mastabas, Excav. Saqq. 1912–14* (Cairo, 1923), 10; pls xxvi, xxvii.

⁷² Smith, *ZÄS* 71, 148.

⁷³ H. Junker, *Gîza: Bericht über die von der Akademie der Wissenschaften in Wien auf gemeinsame Kosten mit Wilhelm Pelizaeus unternommenen Grabungen auf dem Friedhof des Alten Reiches bei den Pyramiden von Gîza*, Vol. V: *Die Mastaba des Šnb (Seneb) und die umliegenden Gräber* (Vienna, 1941), 42–4.

⁷⁴ P. Kaplony, *Die Inschriften der ägyptischen Frühzeit*, I–III (Wiesbaden, 1963), I, 327.

⁷⁵ E. Edel, ‘Beiträge zum ägyptischen Lexikon VI’, *ZÄS* 102 (1975), 21–3. *iti.wy* is an earlier nisbe form for ‘royal linen’, later replaced by ‘*idmy*’. Edel, *ZÄS* 102, 24–7. Also J. Kahl, *Frühägyptisches Wörterbuch. Erste Lieferung* (Wiesbaden, 2002), 62–3.

⁷⁶ J. Kahl, *Das System der ägyptischen Hieroglyphenschrift in der 0.–3. Dynastie* (Wiesbaden, 1994), 714, n. 2156.

⁷⁷ Gardiner, sign list no. T 11. A. H. Gardiner, *Egyptian Grammar* (3rd ed. rev.) (Oxford, 1988); *Wb.* IV, 547, 11 *šsr*: ‘Art Leinen’; Hannig, *Ägyptisches Wörterbuch*, 1241 (30705) *sšr*: ‘Leinenstoff’. The use of *šsr* in archaic contexts instead of the later *sšr* is discussed by Manuélian, *Slab Stelae*, 157. See also A. H. Gardiner, ‘Two Hieroglyphic Signs and the Egyptian Words for “Alabaster” and “Linen”’, *BIFAO* 30 (1930), 175.

⁷⁸ Edel, *ZÄS* 102, 26.

⁷⁹ Kahl sign no. s 2. Kahl, *System*, 710, n. 2133. Discussed by Jones, in Woods, McFarlane, and Binder (eds), *Egyptian Culture and Society*, 251–5.

⁸⁰ P. Posener-Kriéger, ‘Les mesures des étoffes à l’Ancien Empire’, *RdE* 29 (1977), 88–9.



FIG. 8. Stela of Sehefner, Second Dynasty (SQ 2146E, Quibell, *Excav. Saqq.*, pl. xxvii).

forward by Kahl might apply here: that in archaic writing the spelling, orientation and sequence of the signs is completely variable.⁸¹

In the Helwan corpus of reliefs, as noted above, the ‘dress’ sign appears as an ideogram in the linen list on four Second Dynasty slabs. Another slab, EM99-4 dated to the late Second Dynasty, contains the first occurrence of the phonetic writing of the sleeved garment as *mꜣt*, where the sign functions as a determinative (fig. 9).⁸²

At this point, a misreading of the phonetic writing of *mꜣt* on the bone textile label from the Third Dynasty pyramid of Sekhemkhet needs to be reconsidered in the light of new evidence (fig. 10).⁸³ The label shows a truncated linen list, with items of textiles and clothing listed below two indicators of quality, *iti.wy* and *šmꜣ.t nfrt*. The sign group denoting the dress was transliterated as *mꜣt* by Wolfgang Helck⁸⁴ and followed by Kahl,⁸⁵ but not Kaplony.⁸⁶ Examination of the label in the Egyptian Museum, Cairo,⁸⁷ has shown that the sign group does not contain the sign $\triangle t$ that is included in Helck’s

⁸¹ J. Kahl, ‘Hieroglyphic Writing during the Fourth Millennium BC: An Analysis of Systems’, *Archéo-Nil* 11 (2001), 113.

⁸² Slab Nos EM99-4, EM99-5, EM99-18, EM99-23, EM99-30. Köhler and Jones, *Helwan* II, 130–1, pl. 6; 132–3, pl. 7; 158–9, pl. 20; 168–9, pl. 25; 182–3, pl. 32.

⁸³ Z. Goneim, *Horus-Sekhemkhet: The Unfinished Step Pyramid at Saqqara* (Cairo, 1957), pl. 65b. The male sex of the owner poses some problems in interpretation of the garment in this context. Whether the garment was ‘uni-sex’ or whether the commodities list was purely formulaic remains unclear.

⁸⁴ W. Helck, ‘Das Kleidertäfelchen aus der Pyramide des *šm-hꜣt*’, *WZKM* 54 (1957), 72–6.

⁸⁵ Kahl, *System*, 715, n. 2161 (Kahl sign no. s 7); J. Kahl, *Frühägyptisches Wörterbuch. Zweite Lieferung* (Wiesbaden, 2003), 175.

⁸⁶ Kaplony, *LÄF*, I, 328.

⁸⁷ Cairo JE 92679. Permission to examine and publish the label was granted by the former director of the Egyptian Museum, Mohammed Saleh.

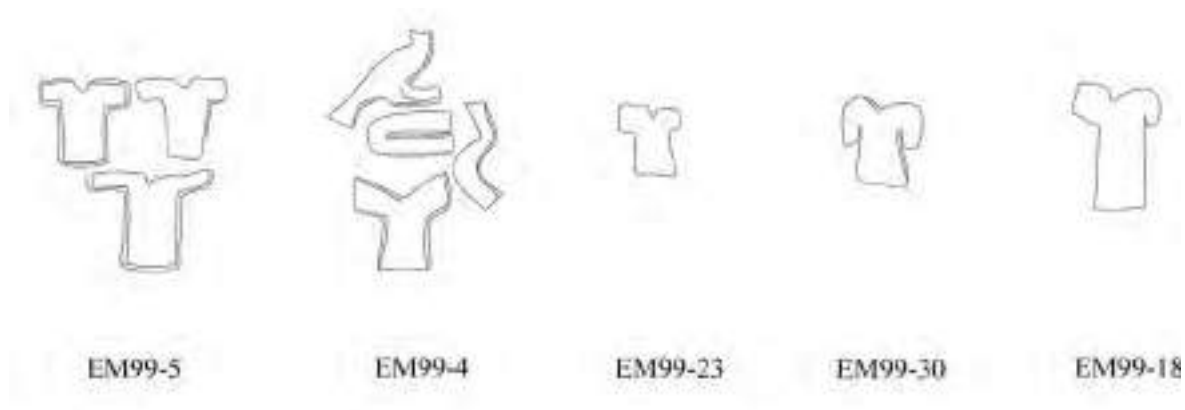


FIG. 9. Palaeography of *m3t*, the sign of the sleeved, V-necked dress (Köhler and Jones, *Helwan* II, 50 fig. 23.1).

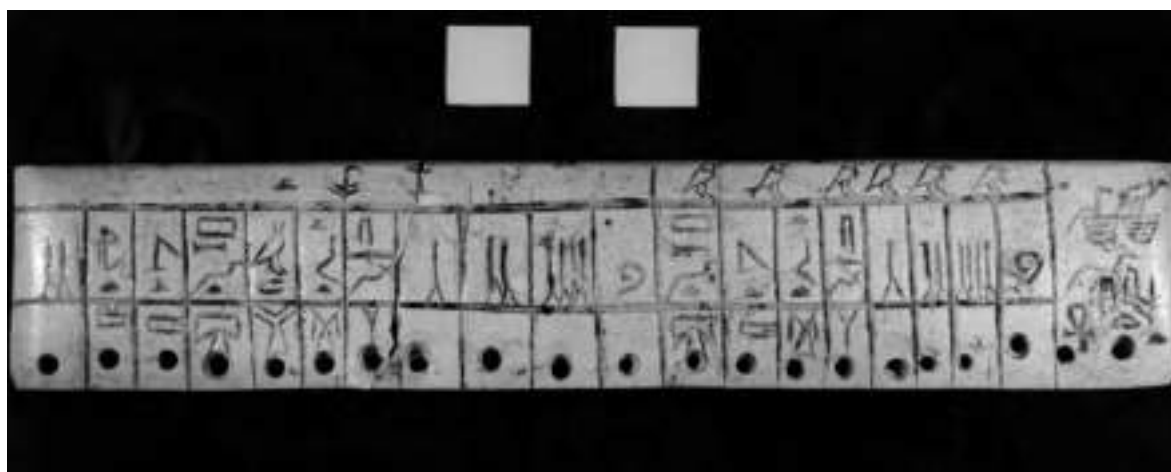


FIG. 10. Textile label from the unfinished pyramid of Sekhemkhet. (Photograph by the author.)
m3t is the fifth sign group from the left.

drawing. Consequently, there appears to be no evidence to support the transliteration of the sign group as *m3tt*, although it is admitted that the feminine *.t* ending is often problematical.

This label contains the last occurrence of the hieroglyph representing a sleeved garment or dress known to the writer. It does not appear in the linen lists beyond the late Second Dynasty, or indeed on the Old Kingdom slab stelae from Giza, contra Hall, who stated that the sleeved garment occurs occasionally as a determinative to *ssf* in the Old Kingdom linen lists.⁸⁸

The misconception that *sf* or *ssf*⁸⁹ refers to a sleeved garment appears to have its origin in the flawed interpretation of a sign group on a heavily eroded, roughly executed relief from Helwan, EM99-1⁹⁰ (fig. 11). In this ‘linen list’ dated to the late First to early Second Dynasties, the first of the three textile signs in the top register

⁸⁸ Hall, *JEA* 67, 169; Ogdon, *GM* 68, 81–3, follows Hall.

⁸⁹ *ssf* is written with the redundant ‘s’. This writing appears in EM99-19 and EM99-34. For discussion of the redundant ‘s’ see Kahl, *System*, 66–70. *sf* is the first textile sign in the Helwan corpus to be written phonetically.

⁹⁰ Relief of Khui-itef (late First to early Second Dynasty), Köhler and Jones, *Helwan* II, 124–5, pl. 3.

was transliterated as *sf* by Kaplony, but with the determinative in the form of a sleeved garment.⁹¹ Examination of the slab showed that no space had been allowed on the panel for the depiction of a second ‘sleeve’. The available space is filled by *s*, which abuts against the frame.⁹² The slab is particularly eroded and sinter-encrusted in the upper right hand corner where the sign group appears, and the existence of ‘sleeves’ is extremely unlikely. Kaplony referred to this writing as a lesser-known form of *sf*.⁹³ A second reading by Kaplony of *sf* as a garment in the textile inventory of EM99-11 is even less plausible, because of the inferior execution of the relief in roughly incised lines.⁹⁴ The writer is not aware of other occurrences of this supposed sign group. Kahl followed Kaplony’s interpretation and allocated the identifying sign number s 3 (Hemd) to this sign group in his study of early writing systems.⁹⁵

In his analysis of the stela of Sehefner, Smith had interpreted *sf* as a narrow cloth, based on the perceived narrowness of the determinative Υ (fig. 8: the first sign group on the right, fourth register).⁹⁶ Posener-Kriéger⁹⁷ and Kahl⁹⁸ also read the sign group *sf* written with this determinative as a narrow textile but of a specific, predetermined size. On the other hand, Henry G. Fischer interpreted the determinative as a bolt of cloth tied in the centre, possibly of unknown, specific dimensions, but not a narrow width. He compared the determinatives occurring in offering lists to representations in Old Kingdom burial chambers of bales of cloth bound together.⁹⁹ The determinative was represented by the \equiv hieroglyph adapted from N 18 in Gardiner’s sign list;¹⁰⁰ Fischer noted that early examples in the linen lists show the tie in the centre.¹⁰¹ This interpretation is illustrated graphically by the determinative of *sf* on the early Second Dynasty relief slab EM99-24¹⁰² (fig. 11) as well as on a newly discovered, as yet unpublished relief slab from Helwan. Although the tied ends are not shown protruding from the top of these determinatives, this feature does not occur in every instance, as can be seen in the examples collated by Fischer.¹⁰³ Furthermore, where *sf* appears in the lists, it is always in the register or section that designates size.¹⁰⁴ This would support the premise that it represents a specific dimension.

⁹¹ Kaplony, *IÄF*, I, 324; 331; pl. 146, 50.

⁹² Gardiner sign list no. S 29.

⁹³ Kaplony, *IÄF*, I, 331.

⁹⁴ Kaplony, *IÄF*, I, 324; Köhler and Jones, *Helwan* II, 144–5; pl. 13.

⁹⁵ Kahl, *System*, 67, n. 78; 714.

⁹⁶ Smith, *ZÄS* 71, 148.

⁹⁷ Posener-Kriéger, *RdE* 29, 94.

⁹⁸ J. Kahl, N. Kloth and U. Zimmerman, *Die Inschriften der 3. Dynastie: Eine Bestandsaufnahme* (Äg. Abh. 56; Wiesbaden, 1995), 175 n. 5; see Kahl, *System*, 65–70 for analysis of the various forms.

⁹⁹ H. G. Fischer, ‘An elusive shape within the fistful hands of Egyptian statues’, in C. Aldred (ed.), *Ancient Egypt in the Metropolitan Museum Journal* (1968–1976) I–II (New York, 1977), 150–4.

¹⁰⁰ Fischer, *Ancient Egypt*, 148–55. The sign follows Gardiner sign list no. S 26 (*šndwt*, a ‘kilt’), as referenced by Fischer, *Ancient Egypt*, 148 n. 41.

¹⁰¹ Fischer, *Ancient Egypt*, 151.

¹⁰² Köhler and Jones, *Helwan* II, 170–1; pl. 26. Fischer, *Ancient Egypt*, 151 n. 50 discussed the occurrence of the sign on Helwan EM99-24, citing it as the earliest attested example. However, he dated the relief to the Third Dynasty on the basis of research by earlier scholars, and incorrectly reproduced the determinative (Fischer, in *Ancient Egypt*, 153, fig. 15a).

¹⁰³ e.g. Fischer, *Ancient Egypt*, 153, fig. 12.b, 12.e–j.

¹⁰⁴ Except on the stela of Sehefner, where it appears in the same register as the dress signs.

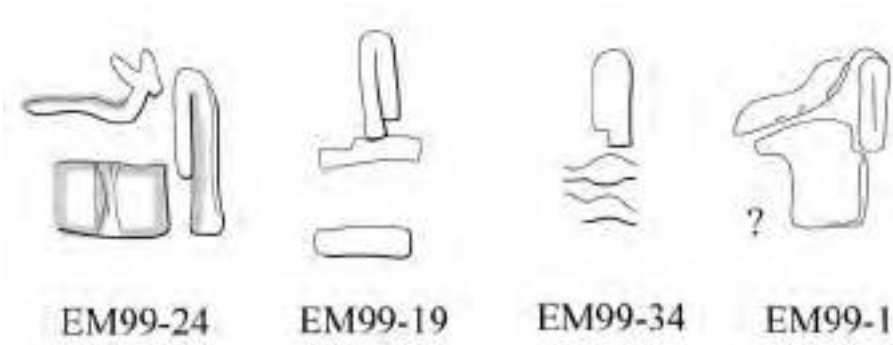


FIG. 11. Palaeography of *sf* in late First to early Second Dynasty reliefs (Köhler and Jones, *Helwan II*, 48 fig. 22.8).

Geographic distribution of the pleated dress and status of the tomb owners

In addition to noting that the pleated dress was never depicted on the monuments, Riefstahl observed that all the extant examples were from humble, provincial burials that lacked the names or titles of the owners.¹⁰⁵ Hall concurred, and concluded that the dress type had enjoyed a brief and limited vogue in Middle Egypt where colder winters prevailed, and suggested that it may have represented a ‘purely local fashion’ dictated by those conditions.¹⁰⁶

Yet the epigraphic and iconographic evidence from the necropolises of the early city of Memphis offers a different perspective on the geographic distribution of the dress type during the Early Dynastic and early Old Kingdom periods. Ogdon questioned Hall’s statement that the dress was restricted to Middle Egyptian sites by pointing out the occurrence of the long-sleeved ‘dress’ sign on four Second Dynasty stelae from Helwan.¹⁰⁷ To this Memphite evidence must be added the dresses depicted on two of the Helwan reliefs, the Louvre figurine, the linen list on the Second Dynasty stela of Sehefner and the Third Dynasty textile label from the pyramid of Sekhemkhet at Saqqara, all discussed above.

Helwan and Saqqara were the two main necropolises serving the city. Helwan was the burial ground for the lower classes as well as middle- and lower-ranking administrators and courtiers, the lesser priesthood and specialist craftsmen (the ‘middle class’), whilst Saqqara was the primary burial site for the highest-ranked elite.¹⁰⁸ Unlike Sehefner, who held the royal title *s3.t nsw*, ‘daughter of the king’, the two Helwan tomb owners depicted wearing the dress did not have titles. Nevertheless, the social ranking of the owners of the relief slabs was probably the highest in the necropolis.¹⁰⁹ Only one of the owners of a relief slab that features the ‘dress’ sign in the linen list had the royal title,

¹⁰⁵ Riefstahl, *BMB* lxxviii.354, 252. McFarlane, *BACE* 2, 75, noted that the El-Hawawish dresses came from an uninscribed wooden coffin in one of a number of small, undecorated burial apartments cut into the rock below the nomarchic tombs.

¹⁰⁶ Hall, *JEA* 67, 170; Hall and Pedrini, *JEA* 70, 139. Also stated by Riefstahl, *BMB* lxxviii.354, 252. Hall noted that the dress from Gebelein is an exception.

¹⁰⁷ Ogdon, *GM* 68, 81–3. Ogdon omitted EM99-5, because it was not included in the Saad publication.

¹⁰⁸ Aspects of Early Dynastic complex society based on evidence derived from the two necropolises are discussed in Köhler and Jones, *Helwan II*, 92–6.

¹⁰⁹ Köhler and Jones, *Helwan II*, 79–83, 94–5.

s3 nsw, ‘son of the king’.¹¹⁰ The 40 garments offered in that list are classified as *iti.wy*, ‘royal linen’, which was the highest quality.

Moreover, the surviving First Dynasty dress originated in tomb 2050, one of the great, niched mastaba tombs at Tarkhan, located 30 km south of Memphis.¹¹¹ Seventeen different qualities of textiles survived the plundering of that tomb. Among these were examples of high-end, extraordinarily fine linen, as expected in the burial of high-status individuals. In 1915, William Midgley described the textiles as being finer than the finest contemporary machine-made Irish linen.¹¹² Significantly, Hall noted that the cut of the Tarkhan dress was more ‘sophisticated’ than that of the later Deshasheh dresses.¹¹³ Neither the surviving dress nor that depicted on the relief slab of N(i)t-mah has pleating on the skirt, making the style more graceful than the cumbersome, fully pleated dresses of later date.

Conclusions

An appraisal of the available information pertaining to the pleated, V-necked dress has shown that there is disparity between the Early Dynastic period and the Old and Middle Kingdoms both in the diffusion of the dress and social status of the individuals. The iconographic evidence from the Helwan stelae and the Louvre ivory figurine shows that the pleated dress was in fact depicted on monuments of the middle-ranking elite in the First and Second Dynasties in the Memphite region.

Furthermore, epigraphic evidence in the form of linen lists from the early to mid-Second and Third Dynasties attests to the demand for large numbers of the garment as desirable funerary equipment. A distinct hieroglyphic sign denoting the dress appears in the linen lists of five relief slabs at Helwan, on a stela at Saqqara, and on a bone textile label from the Third Dynasty pyramid of Sekhemkhet. The latter shows that this specific type of garment was still deemed to be a necessary inclusion amongst the textiles offered in high-ranking burials at that time. The sign group on the Sekhemkhet label appears to be the last known occurrence within a list of linen offerings.

Examination of the label revealed that an incorrect transliteration based on a misreading of the sign group *m3t* had been perpetuated in the record. This deduction was supported by comparison with the phonetic writing on one of the Helwan reliefs, EM99-4. Another doubtful interpretation of *sf* as a sleeved garment, which had its origins in an implausible reading of a damaged First Dynasty relief from Helwan, has also been rejected.

The extant First Dynasty Tarkhan dress provides contemporary archaeological evidence to challenge the premise that depictions in art differ from surviving clothing and do not relate to reality. Notwithstanding that the dress was not represented on the

¹¹⁰ EM99-23, *ini-sw-ḥkt*. Köhler and Jones, *Helwan II*, 168–9, pl. 25. However, reassessment of the name and title suggests that the owner may have been female (see n. 50, above).

¹¹¹ Petrie, *Tarkhan II*, 5–8; pl xxviii.

¹¹² W. Midgley, ‘Reports on Early Linen’, in W. M. F. Petrie and E. MacKay, *Heliopolis Kafr Amar and Shurafa* (London, 1915), 48; J. Jones, ‘Pre- and Early Dynastic Textiles: Technology, Specialisation and Administration during the Process of State Formation’, in B. Midant-Reynes and Y. Tristant (eds) with the collaboration of Joanne Rowland and Stan Hendrickx, *Egypt at its Origins 2: Proceedings of the International Conference ‘Origin of the State: Predynastic and Early Dynastic Egypt’*, Toulouse, 5th to 8th September 2005 (Leuven, 2008), 121–2.

¹¹³ Hall, *JEA* 67, 170.

monuments of the Old and Middle Kingdoms, it survived in the archaeological record in seemingly commonplace, unmarked burials at provincial sites. It did not have a 'limited vogue', but was in use for some 1,000 years.

The classic, V-necked sleeveless sheath dress and the pleated, V-necked dress with sleeves were depicted concurrently on the Early Dynastic reliefs from Helwan. Consequently, earlier hypotheses that the pleated dress style developed from the Old Kingdom sheath dress are no longer convincing.

Yet we are faced with a dilemma in how to 'read' the evidence. As an apparently less common alternative to the sheath dress in the Early Dynastic period, many questions regarding its function remain. The reported signs of wear on the Tarkhan dress show that it was not designed exclusively as a garment for the dead. In life and in artistic representation, was the pleated dress an indicator of age, status, gender, or rank in society? Or was it a garment worn on specific occasions? Furthermore, how did it evolve from a dress worn by the middle- to high-ranking elite of the early Dynasties into one favoured by anonymous women buried in provincial cemeteries from the Old Kingdom onward? Further scholarship and renewed interest in the archaeological evidence, from past excavations and from future finds, will help to refine past interpretations and provide answers to these outstanding questions.