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### **About this issue:**

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## **Biography in Ancient Egypt: Bead-Nets**

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### *Abstract*

Ancient Egyptians used to provide their deceased loved ones with diverse types of artifacts. These were thought to ensure safe passage through the underworld and fulfil the deceased's needs in the afterlife. Beads were mainly used as jewellery, and, less frequently, to produce netted dresses, to decorate garments with net-like patterns, and to form netted mummy covers. All objects were retrieved from burial contexts. These items, apparently different, embody the focus of inquiry of the present article. All objects discussed in this work were retrieved from burial contexts. Mainly following the excavations of the first half of the 20<sup>th</sup> century, bead-nets were brought to Europe and the New World to constitute private collections or to be kept in museums, re-contextualised to portray power within the imperialist scenario of hegemonic Western character.

The paucity of detailed reports concerning their discovery also caused the scarcity of bead-nets' in-depth examination by scholarship over time. In this paper, examples from the Old Kingdom to the Ptolemaic Period will be analysed qualitatively according to the beads' size, shape, material and colour to determine their possible function in daily life and their role and religious symbolism within the funerary sphere. Ultimately, this research aims to outline the biography of the object and show an evolution of the use of bead-nets in ancient Egypt. While the purpose of bead-nets within the funerary and religious dimensions was to protect the deceased and secure their rebirth, the acknowledged breaks and shifts of such evolution seem to point to changing burial practices and occurrences of socio-political distress.

### *Keywords*

Bead, faience, bead-net dress, robe, beaded garments, shroud, mummy covers, intertwined bandages, amulet, Nut, death, and rebirth.

## Introduction

*“Beads, beadwork, and other kinds of personal ornaments [...] are among the earliest known symbolic expressions of modern humans and represent an important tool for identification of thinking and cognition in archaeological sciences”.*<sup>1</sup>

Throughout ancient Egyptian pharaonic history, beads have been mostly employed to constitute pieces of jewellery. In less frequent instances, beads were produced to form netted dresses, decorate garments or shrouds, and make netted mummy covers.

Examples of each of these artifacts were discovered within storage boxes or on top of wrapped corpses in tombs of royals and probably high-status individuals, only a minority in the society of ancient Egypt. Mainly following the excavations of the first half of the 20<sup>th</sup> century, bead-nets were brought to Europe and the New World to constitute private or museum collections. Through a mechanism of ‘Orientalism’,<sup>2</sup> they were re-contextualised to portray Western hegemony within the imperialist scenario of the time.

While the beaded dresses seem to have been confined to the Old Kingdom,<sup>3</sup> the mummy covers appear to have been a feature unique to burials dating back to the Third Intermediate, Late, and early Ptolemaic Periods.<sup>4</sup>

The present article attempts to trace the biography and evolution of bead-nets in ancient Egypt from the Old Kingdom to the Ptolemaic Period. Chosen from original excavation reports and unpublished notes, examples of bead-net dresses, beaded garments, and bead-net mummy covers will be analysed qualitatively. Also, due to their similar pattern, a comparison will be suggested between netted bandaging of the Roman period and the earlier bead-nets, thus hypothesising the bead-nets’ *longue durée* and possible continuation of use in the Roman world in Egypt. This article will identify trends of differentiation and common ground in the arrangement, size, shape, material, and colour of the beads. It considers artifactual, written, and representational evidence in an effort to define bead-nets, their function and symbolism – and identify the underlying human thinking - within the spheres of daily life and in their mortuary and religious dimensions.

## Theoretical Framework

A very few authors have focused on bead-nets in their research. Janssen, for example, analysed the well-known bead-net dress discovered at Qau by Petrie; she attributed an erotic connotation to this diaphanous dress.<sup>5</sup> Also, Silvano’s publication stands out for her attempt to classify bead-nets of the Third Intermediate, Late, and Ptolemaic Periods according to their typological features (Fig. 1). By considering both the nets displayed in museums and as described in published excavation reports, she outlines the bead-nets’ potential symbolic meaning in relation to the dead.<sup>6</sup>

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<sup>1</sup> Choyke and Bar-Yosef Mayer 2017: 1.

<sup>2</sup> Said 1979.

<sup>3</sup> Janssen 1996.

<sup>4</sup> Ikram 2003: 101-102; Taylor 2001: 206-207.

<sup>5</sup> Janssen 1996: 42.

<sup>6</sup> Silvano 1980.

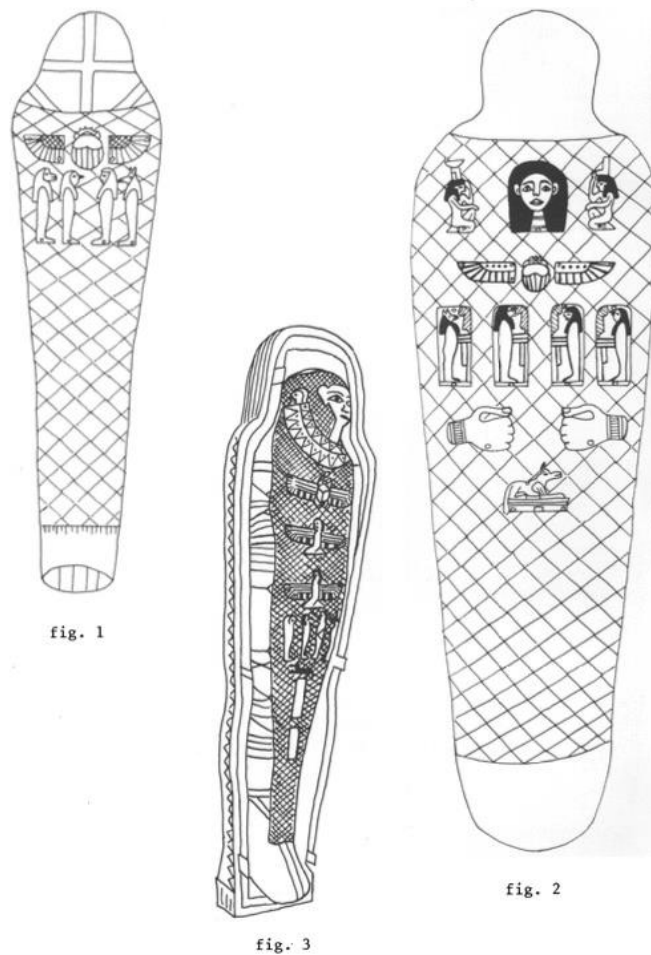


Figure 1

Typological classification of bead-net covers by Silvano. Eight to nine examples from both original archaeological contexts and museum collections are considered per type. Type A (fig.1): the net covers the body from shoulders to ankles. It is characterized by the winged scarab and the four genii attached to the net's meshes. Type B (fig.2): the net covers the body from shoulders to ankles. The amuletic figures are more varied and can be found sewn into the net and attached to it. When the amuletic figures are sewn, the meshes of the net are narrower. Type C (fig.3): the net covers the body in its entirety. The amuletic figures are sewn into the net, and the meshes are even narrower.<sup>7</sup>

Other authors have symbolically associated the net with Osiris, adding on further ideas linked to the Egyptian belief in life after death.<sup>8</sup> Another meaningful but questionable contribution to the literature on this subject was later provided by Arnst<sup>9</sup> who evaluated the symbolism of bead-nets through a comparison with similar patterns identified in Australian rites of initiation.<sup>10</sup>

Yet, no attempt seems to have been made to study bead-nets in all their components nor to delineate a solid connection between them - functional or symbolic; or indeed between bead-net dresses, garments and mummy covers. No author appears to have established a precise definition of each of these slightly different object categories long neglected by research on Egyptian mortuary material. This gap in scholarship may be attributed first to the paucity of detailed reports concerning their context of discovery. It was mainly throughout the 20<sup>th</sup> century that these items were separated from

<sup>7</sup> Silvano 1980: 84-85.

<sup>8</sup> Such as Zibelius Chen 2011.

<sup>9</sup> Arnst 1998.

<sup>10</sup> See Schuster and Carpenter 1996.

their original setting without systematic documentation. Secondly, the bead-nets' fragmentary nature, and their reduced probability of preservation in the archaeological record may have also played a significant role in their rare appearance in the academic discourse. Indeed, beads, usually inorganic and more durable, have survived across the centuries, whereas the threads binding them together, which were often made of organic material, have deteriorated either partially or completely.<sup>11</sup>

## Methods

This research addresses the current gap within the literature mentioned above, with the aim of partially bridging it and laying the groundwork for future research on the subject.

On one hand, developing on Silvano's typological classification and interpretation,<sup>12</sup> bead-nets will be considered in light of the evidence gathered from reports of the original archaeological contexts. From each of the major chronological periods of ancient Egyptian history – that is, from the Old Kingdom to the Ptolemaic Period – examples of bead-net dresses, beaded garments, shrouds, and bead-net mummy covers from various burial sites will be identified and evaluated qualitatively.

On the other hand, following Janssen's work,<sup>13</sup> this article uses art as a means of connection between the different types of bead-nets, to delineate general trends of the evolution of bead-nets in terms of their external features, function, and intrinsic spiritual meaning. Most importantly, art will work as a 'background' source to attest the presence of netted patterns in pictorial representations on walls, statuettes, coffins, and other objects throughout ancient Egyptian history.

It is worth noting that the wide diffusion and repetition of such geometric designs on a considerable number of ancient Egyptian artifacts may represent more than just an ornamental motif, more than "art for art's sake" (Théophile Gautier).<sup>14</sup> Beads, indeed, like hieroglyphs, can be considered as symbolic repositories of knowledge. Believing in the power of symbols, ancient Egyptians may have conceived of one more dimension of significance to communicate with the divine, in an attempt to bridge the gap between the human world and that of the gods.<sup>15</sup>

## Daily life dimension

A possible use of the bead-net garment in daily life can only be informed by a few surviving elements. Concerning the bead-net dress commonly worn by women, a reference to it was already believed to have been made<sup>16</sup> in a famous passage in the Old Kingdom's Papyrus Westcar, where Sneferu's boating party is narrated:

I shall go boating! [...] Let there be brought to me twenty women (10) with the shapeliest bodies, breasts, and braids, who have not yet given birth. Also let there be brought to me twenty nets and give these nets to these women in place of their clothes! [...] They rowed up and down, and his majesty's heart was happy (15) seeing them row.<sup>17</sup>

However, different theories have been formulated regarding the significance of this written evidence. Despite the use of the word *i3dt* for net, there is no mention of beads. In Erman's translation it can be read: "a fish-pendant of new malachite fell into the water".<sup>18</sup> Due to the word *nh3w*, he attributed the

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<sup>11</sup> Bos 2017: 115-116; Xia 2014: 3.

<sup>12</sup> For a visual representation of the three different typologies (i.e., A, B and C) see Silvano 1980: 84-85.

<sup>13</sup> Janssen 1996.

<sup>14</sup> Bianchi 1998: 24.

<sup>15</sup> Assmann 1992; Bianchi 1998: 29.

<sup>16</sup> E.g., Brunton 1927: 64. He already refers to the Papyrus Westcar when mentioning the retrieval of the bead-net dress at Qau.

<sup>17</sup> Lichtheim 2006: 216.

<sup>18</sup> Erman 1927: 39.

fish-pendant to a hair ornament in the shape of a fish, which was sometimes worn by women when boating.<sup>19</sup> Later, studies of the text by Hall<sup>20</sup> and Janssen<sup>21</sup> preferred to believe the written evidence to have referred to a knotted clothing in linen, similar to the Predynastic/Early Dynastic netting fragment from Thebes, now in the Boston collection.<sup>22</sup>

Indeed, it was also argued that the beads threaded together in a net-like pattern, as those found in Old Kingdom burials, constituted too fragile of a garment to be worn by Egyptian dancers for any length of time.<sup>23</sup> Yet, because no substantial samples of threading have ever been found to be studied, no further evidence can be used to prove or disprove such inferences.

On the other hand, it is possible that the dress was worn by women only on specific occasions over the year and for a short time. It could have once constituted a festive garment. Indeed, festivals, such as the Feast of the Valley or the Festival of Osiris, were a time of stimulation of the senses through sound, movement and scents, which Egyptians believed transcended the boundary between the world of the living and that of the dead, in a celebration of the unending cycle of life, death and rebirth.<sup>24</sup> Women in netted dresses could have stimulated hearing through the supposed rattling sound made when moving, and stimulated sight thanks to their physical forms – which would be visible if no textile was underneath the net. In this way, they may have embodied the erotic connotation addressed by Janssen.<sup>25</sup> Fertility and hence, the cyclical concept of life, could have been recalled.

Although current publications of small finds from settlements such as Amarna show that individual, unstrung beads were produced in large quantities, complete pieces of garments – composed of organic material as well – are not in any way regular finds from domestic sites, thus contributing to the unlikelihood of bead-net dresses to have survived in such contexts. Though a re-examination of old campaigns might produce more results, it will not be possible to discuss evidence of the bead-nets' daily life dimension more fully because of a lack of significant examples from outside of funerary contexts.

### *Funerary and religious dimensions*

In contrast to the lack of evidence for bead-net use in daily life, we have a lot more surviving evidence to examine from tombs. It can be argued that the Third Intermediate and Late Period beadworks were produced especially for burial. Bead-nets were apparently not as essential as the coffin since they are less frequently encountered throughout ancient Egyptian history. Yet, they may have served a specific purpose within the mortuary scene; that of securing rebirth for the deceased. This funerary and religious significance may be inferred through a critical assessment of works on ancient Egyptian cosmological beliefs and their peculiar connection to the world of symbols, of deities, colours, and materials.

The blue-green colour of the beads, and their netted organization, seem to have characterized the Old Kingdom dresses as well as Tutankhamun's garments, and the later mummy covers. The blue colour was associated with the heavens and waters, and in both cases, it was believed to function as a symbol of life and rebirth.<sup>26</sup> On the one hand, its link to the sky was a reference to the goddess Nut or Hathor - usually equated to Nut as "mistress of the sky", "the lady of Turquoise". On the other hand, its connection to the waters was also an allusion to the river Nile and its inundation, and an "annual reminder or re-enactment of the watery origins of the world".<sup>27</sup> Osiris was the god associated

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<sup>19</sup> See Blackman 1925: 212.

<sup>20</sup> Hall 1986: 65.

<sup>21</sup> Janssen 1996: 47.

<sup>22</sup> See Janssen 1996: 46. The knotted clothing fragment is today preserved at the Museum of Fine Arts, Boston. 57.152.

<sup>23</sup> Janssen 1996: 45.

<sup>24</sup> Teeter 2011.

<sup>25</sup> Janssen 1996.

<sup>26</sup> Friedman et al. 1998: 15; Kaezmarezyk and Vandiver 2006: 57; Wilkinson 1994: 107.

<sup>27</sup> Wilkinson 1994: 107.

with water, inundation, soil, and vegetation,<sup>28</sup> and additionally through key Egyptian mythology, with life and rebirth.

In a similar manner, the green colour used for the beads was “naturally a symbol of growing things and of life itself” and a powerful sign of resurrection.<sup>29</sup> Indeed, in early texts, the afterlife is referred to as ‘field of malachite’ after the green mineral used by the Egyptians to create green pigment. Osiris, being the king of the underworld and the first man to be reborn, was also frequently depicted with green skin.<sup>30</sup>

The concept of life, fertility and rebirth was also recalled by the faience itself, which most of the bead-net examples considered here were composed of. The Egyptian word for faience, *thnt*, relates etymologically to terms with connotations of luminosity and scintillation.<sup>31</sup> While recalling the goddess Nut or Hathor with its blue colour, faience was also believed to be a metaphor for the Sun god because of its glazed appearance.<sup>32</sup>

Therefore, through material and colour an interaction of the opposition of male and female principles could be recognized, being that of the Sun god Re and Nut, or of Re and Hathor. Present in “all mythological constructs projected into a generative framework”, such complementary relationships were considered by ancient Egyptians to be essential for renewal. In this way, metaphorically incorporating male potency and female fertility, bead-nets may have served the function of ensuring rebirth to the dead and their transformation into an immortal transfigured being (i.e., *akh*).<sup>33</sup>

As the coffin’s upper part was thought to represent the solar universe while the lower the Osirian kingdom of the Underworld, the lid was usually decorated with images of the sky personified by Nut. This was especially true for the Late Period.<sup>34</sup> Therefore, bead-nets of the Third Intermediate and Late Periods could have provided a further reference to the sky goddess positioned on the upper side of the body towards the solar universe. Nut, becoming the net, would have welcomed her child (i.e., the dead/Osiris/Re) back into her womb at night in order to ensure his celestial rebirth at dawn.<sup>35</sup> The net may have reinforced the power of the coffin, which concerned the universe of the deceased and the body of Nut.<sup>36</sup> Its role was to protect the dead body and secure its rebirth, through its identification with a god of creation and acquisition of their regeneration powers.<sup>37</sup> In Petrie’s words, it can be suggested that the netting had a phylactic, homopoeic and theophoric amuletic functions.<sup>38</sup> It is plausible that the same meaning was being conveyed into an actual funerary object, reinterpreted, and reinvented over the centuries by an ever-changing society: from bead-net dresses to a garment in beaded netting, to bead-net covers over the deceased body. From the Old Kingdom to the Ptolemaic period, the idea of the unending cycle of life, death and rebirth was likely to have been symbolically encompassed within the bead-net.

### *Gender Dimension*

It is also interesting to discuss the gender dimension of the bead-nets as it may give us insight into male and female interaction and social organization in ancient Egypt; it may provide us with a way of characterising relationships of power.<sup>39</sup> Overall, the archaeological record from ancient Egypt has revealed a complex system of gendered divisions based for the most part, on biological sex, from

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<sup>28</sup> Breasted 1912: 23.

<sup>29</sup> Andrews 1990: 37; Wilkinson 1994: 108.

<sup>30</sup> Taylor 2001: 28; Wilkinson 1994: 108.

<sup>31</sup> Bianchi 1998: 24.

<sup>32</sup> Kaezmarezyk and Vandiver 2006: 57.

<sup>33</sup> Troy 1986: 21, 26.

<sup>34</sup> Niwinski 2018: 36-37.

<sup>35</sup> Cooney 2014: 271.

<sup>36</sup> Assmann 2005: 164-165; Billing 2002; Niwinski 2018: 35.

<sup>37</sup> Cooney 2010: 228.

<sup>38</sup> Petrie 1914: 6-7.

<sup>39</sup> Scott 1986: 1067.

visual representations to physical artifacts.<sup>40</sup> The Old Kingdom dresses appear to be limited to females.<sup>41</sup> Yet, it could also be that only female examples have survived from this period. The New Kingdom examples of Tutankhamun's garments together with the examples of the Third Intermediate and Late Periods may suggest the bead-net to have been a grave good for both female and male individuals. This hypothesis might be corroborated by the male and female complementary interaction which ancient Egyptians believed essential for renewal, rebirth being a central concept in ancient Egyptian cosmological views and funerary traditions. Also, it would align with the interpretation of the bead-nets' function and symbolism as amulets ensuring the rebirth of the deceased.

Thereby, bead-nets appear not to be confined to one gender only. Nevertheless, a considerably higher number of mummies with beadworks of determined biological sex would be necessary to formulate more statistically significant conclusions.

## Data and Context

Bead-nets retrieved over time have been identified in funerary contexts from different sites and dating back to varied periods in ancient Egyptian history. As detailed below, four examples of bead-net dresses were discovered in Old Kingdom burial sites, while a larger amount of bead-net mummy covers were found in Late Period upper class tombs geographically spread over Egypt. Other examples in different forms were also brought to light in burials dating back to the New Kingdom, Third Intermediate and early Ptolemaic Periods, including decorated robes and bead-net covers in both human and animal burials.<sup>42</sup> In between the Old Kingdom and the New Kingdom, bead-net garments and mummy covers have not themselves physically survived but they are attested in contemporary artistic representations. That is also the case for the Roman Period, when a new interpretation of the object may instead be identified in the intertwined mummy bandages.

As mentioned earlier, dresses in beaded netting and the net motif are present in ancient Egyptian art from the Early Dynastic Period to the Roman era, placed on walls, statuettes, coffins, and other artifacts.

### *Old Kingdom*

From the sites of Qau and Giza, only four examples of bead-net dresses have been retrieved, two of which are the most cited by scholarship.

#### *Old Kingdom 1*

This dress in beaded netting was discovered by Reisner, who led the Harvard University Expedition team in 1927 at the Giza necropolis. Approximately seven thousand cylinder and ring beads of pale green, dark and light blue faience were found scattered on top of the wrappings of an unidentified woman.<sup>43</sup> Some beads were found in groups, preserved in situ in the exact configuration of a girdle layout below the breasts, and in a net-like pattern on the left side of the corpse, still tied together by their original threading (Fig. 2a). The dress was once composed of a collar made of cylindrical beads with gilded pendants, a halter style top, and a skirt with a fringed edge of beads with conic pendants. It would have probably covered the whole mummy, and not just its front.<sup>44</sup> Cloth fragments of the wrappings underneath the item were identified as breast caps made of linen, although detailed drawings made during the excavation indicated that the beadwork was independent of the textile.<sup>45</sup>

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<sup>40</sup> Wilfong 2010: 165.

<sup>41</sup> Brunton 1927: 23.

<sup>42</sup> Bos 2017; Ikram 2003, 101-102; Mond and Mayers 1934: 128-129.

<sup>43</sup> Vogelsang-Eastwood 1993: 125.

<sup>44</sup> Jick 1988: 79; Freed et al. 2003: 74.

<sup>45</sup> Seth Smith and Lister 1995: 167.



Currently preserved at the Boston Museum of Fine Arts, the long fitting dress was later reassembled by experts thanks to photographs and a detailed description of tomb G 7442 provided by an unpublished excavation diary (Fig. 2b).<sup>46</sup>



Figure 2 - a. Skeleton of tomb G 7442 [G7440 Z] showing the beads in situ. The groups of beads in the girdle layout and net pattern are pointed out. Giza, Eastern Cemetery. Fourth Dynasty, c. 2551-2528 BC. (Photograph © Giza Project at Harvard University - <http://giza.fas.harvard.edu/sites/2165/full/>). b. Reassembled dress. Dimensions: 113x44 cm. Cylindrical beads: c. 3 cm; ring beads: c. 0.4-0.5 cm. Photograph © Museum of Fine Arts, Boston. 27.1548.1.

The restrung pattern of the beads was likely interpreted based on known examples of lozenge patterned dresses painted on statuary and reliefs (such as the Fourth/Fifth Dynasty statue of E't'e, wife of Sechemka<sup>47</sup> and a relief in the mastaba of Princess Hemet-Ra at Giza<sup>48</sup>).

### Old Kingdom 2

A similar dress was found at the Southern cemetery of Qau by Brunton in his archaeological season of 1923-1924.<sup>49</sup> Within grave no. 978, unfortunately robbed, a box was part of the funerary equipment of an individual whose corpse was already missing. It contained a conspicuous number of blue and black glazed cylinders, green and cream ring beads of faience, along with two small blue and black glazed caps which were pierced for threading and had likely functioned as breast covers. Also, *Mitra* shells, interspersed with larger ring beads and different from those beads of the halter and skirt, formed strings at the bottom of the dress. These are believed to have once “rattle[d] when the wearer danced”.<sup>50</sup> According to early experts and as mentioned above, the dress seemed to recall a well-known passage narrated in Papyrus Westcar of the Old Kingdom.<sup>51</sup> In the 1950s the first reconstruction of the garment was attempted but, regarded as inadequate, it was assembled again in the early 1990s by using approximately half of the beads recovered due to the fragmentary state of many of them. Though having once been a complete garment, only its front is now on display at the Petrie Museum (Fig. 3).<sup>52</sup>

<sup>46</sup> Jick 1988: 79.

<sup>47</sup> Erman 1894: 212-213; Riefstahl 1944: 11-12.

<sup>48</sup> Hassan 1932: 56-57.

<sup>49</sup> Brunton 1927: 23-24.

<sup>50</sup> Brunton 1927: 24.

<sup>51</sup> Brunton 1927: 23-24; Hall 1986: 65; Lichtheim 2006: 216; Seth-Smith and Lister 1995: 165-66.

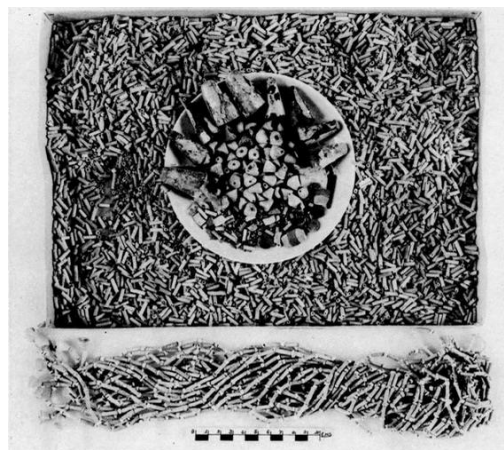
<sup>52</sup> Seth-Smith and Lister 1995: 168.



*Figure 3 - Reconstructed bead-net dress from tomb 978, Southern cemetery, Qau. Fifth Dynasty, c. 2456-2323 BC. Dimensions: 51x 57 cm; cylindrical beads, 2-2.2 cm; ring beads of halter and skirt, 0.2-0.3 cm; ring beads of bottom fringe, 0.5-0.6 cm; breast caps, 4.3 cm. Petrie Museum, London, UC 17743 (Photograph © Petrie Museum).*

### Old Kingdom 3

In a different area of the Giza necropolis, south-east of the pyramid of Cheops and close to the Sphinx, one more female beaded robe was recognized during the Egyptian University of Cairo excavations of 1930-1931. Within tomb shaft 294, a female body was found clothed with a dress made of numerous cylindrical and ring-shaped faience and copper beads threaded together. Like the other examples, it was detailed with a fringe at its bottom edge. Yet, this dress uniquely featured six freely hanging bronze cones covered with leaves of gold (Fig. 4).<sup>53</sup> No further detail concerning this bead-net dress' retrieval is available to date.



*Figure 4 - Faience and copper beads from shaft 294, Southern Cemetery, Giza. Fourth – Fifth Dynasty ? (Hassan 1936, PL. LIII 2) (Photograph © Giza Project at Harvard University).*

<sup>53</sup> Hassan 1936: 150.

#### *Old Kingdom 4*

Another dress was found by the Harvard expedition at Giza in pit G 5520 D [G2342], Western Cemetery. However, no exhaustive description of its discovery is reported. It is made of faded blue-green glazed faience beads, both cylindrical and ring-shaped. It featured a fringe with conical floral pendants at its bottom edge.<sup>54</sup> This reconstructed dress is preserved at the Boston Museum of Fine Arts as well (Fig. 5).



*Figure 5 - Reconstructed bead-net dress from pit G 5520 D [G 2342], Western Cemetery, Giza. Sixth Dynasty, ca. 2323-2150 BC. Dimensions: cylindrical beads 3-3.2 cm; ring beads, 0.4-0.5 cm. (Photograph © Museum of Fine Arts, Boston). 33.1020.1.*

#### *New Kingdom*

Except for two examples, no trace of bead-nets from this period seem to have survived. Two tunics heavily decorated with faience and glass beads were found in Tutankhamun's tomb. One was folded up inside a painted wooden box and the other in a gilt and inlaid casket comprising part of the pharaoh's rich burial equipment. While the former (021d) was well preserved in place, the latter (044w) was decayed to the extent that only a few fragments survived and few notes could be taken of the decoration (Fig. 6). Dating back to the Eighteenth Dynasty, they were found in 1922 by Howard Carter and his team during the clearance work of the pharaoh's tomb. Made of linen, robe 021d was embellished at the sides and in its middle with vertical bands of short barrel beads and a net in between the bands. Perpendicularly sewn to the bands, the net was made of long plano-convex tubular and circular beads of faience, with golden sequins placed in an alternating pattern inside the meshes.<sup>55</sup> A large portion of its upper surface was taken out – and successfully preserved - thanks to a celluloid solution, and small parts of the lateral bands were preserved for future research by means of wax.<sup>56</sup>

<sup>54</sup> Reisner 1927.

<sup>55</sup> Bos 2017: 120-121; Carter and Mace 2014 [1923]: 154.

<sup>56</sup> Carter and Mace 2014 [1923]: 158.

Similarly, the other linen garment, 044w, had bands of beads at its sides and a net at its front which was obliquely sewn to the bands. The net was made of long blue and green cylindrical and smaller double cylindrical faience beads and had gold rosettes inside the meshes.<sup>57</sup>



Figure 6 - Box 021, as labelled by H. Carter in his published notes. The beaded robe (021d) is evident among the other contents. Faience and glass beads sewn into linen. Tutankhamun's tomb, antechamber, Valley of the Kings, Western Thebes. Eighteenth Dynasty (Photograph © Griffith Institute, University of Oxford).

### ***Third Intermediate and Late Period***

Only a few examples of Third Intermediate Period mummies covered by bead-nets are mentioned in published reports, as detailed below, whereas there are a higher number of Late Period examples which seem to be peculiar as, for example, those from the Memphite necropolises area.

#### ***Third Intermediate Period 1***

In the Lahun excavations of 1881-1891, Petrie uncovered tombs dating back to the later period of its occupation, that is from the Twenty-Second to the Twenty-Fifth Dynasties of the Third Intermediate Period. In his words:

“Many of the mummies ha[d] bead net-works and patterns upon them, with figures of winged scarabs, the four genii, the *ba* bird, and other emblems, all executed in coloured beads”.<sup>58</sup>

No photographs or illustrations of these bead-nets are present in Petrie's 1892 publication of the site. During the season of 1889-1890, “the most elaborate example” of beadwork dating back to the Twenty-Second Dynasty, was identified at Lahun, close to the Pyramid of Senwosret II. According to Petrie the item included:

“a diagonal net on the head, a beadwork face on the face joining to a beadwork collar which again joined to a scarab with wings: then a line of diagonal net and a *ba* bird with outspread wings; then three lines of diagonal and a Ma [or Nut] with outspread wings: then more diagonal work, and the row of four genii of Amenti, and some unintelligible patterning below vanished”.<sup>59</sup>

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<sup>57</sup> See Carter 1922: cards 044w-1, 044w-2.

<sup>58</sup> Petrie 1892: 125.

<sup>59</sup> Petrie and Sayce 1974: 24.

No details were given regarding the beads' materials, nor their shape, nor on the other Twenty-Second Dynasty examples from Lahun. Petrie reported only that the nets were embellished by "designs in coloured beads threaded closely together".<sup>60</sup> Assuming that the designs stood for the amuletic figures sewn into the net, and considering the presence of a beadwork face too, this example appears to belong to the type C classified by Silvano.<sup>61</sup>

### Third Intermediate Period 2

In the winter of 1894-1895, an excavation was conducted at the temple of Hatshepsut at Deir el-Bahari. In the vestibule of the Hathor shrine, an untouched tomb was found. Among three large coffins belonging to members of a family of priests from Thebes, there was the mummy of Zet-Tehuti-Auf-Ankh's (or Djed-djehuty-iuef-ankh).<sup>62</sup> Enveloped in a pink cloth, it was covered with a net of cylindrical and ring-shaped faience beads of dark blue and turquoise colours which, forming small meshes, were organized in alternating rows. A winged scarab and the four sons of Horus, made up of small disc beads of different colours, were an integral part of the net.<sup>63</sup> In this regard, the net could be placed in the middle ground between Silvano's type A and B. While no pictures of the original context are present in the excavation report, the mummy and his richly decorated coffins are currently on display at the Ashmolean Museum in Oxford (Fig. 7).

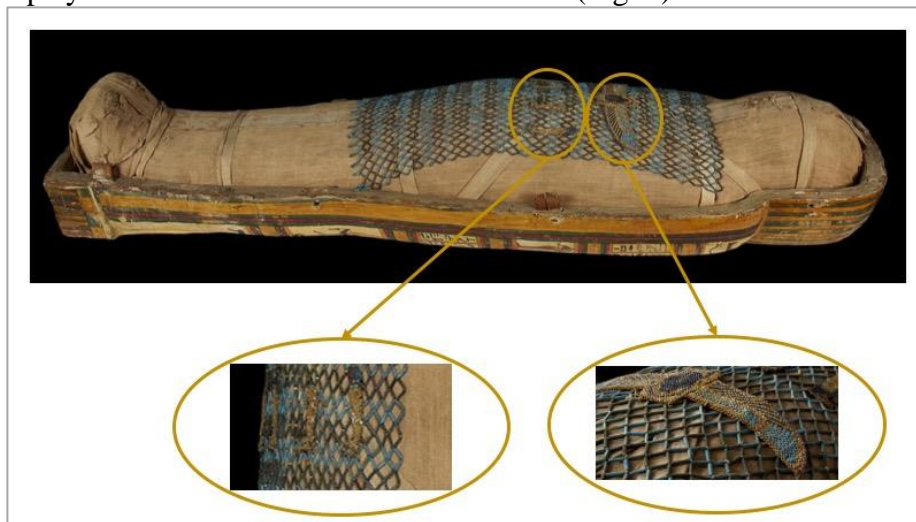


Figure 7 - Mummy of Zet-Tehuti-Auf-Ankh (or Djed-djehuty-iuef-ankh) with a bead-net cover. Close ups of the winged scarab and the four genii in small, coloured disc beads. Temple of Hatshepsut, Deir el-Bahari, Western Thebes. Twenty-Fifth Dynasty, Ca. 770-712 BC. (Photographs © Ashmolean Museum, University of Oxford). AN1895.153, 155-156.

### Third Intermediate Period 3

During the 1902-1904 campaigns at Beni Hasan, Garstang reported that his team had "excavated in a merely experimental manner"<sup>64</sup> tombs from the Twentieth to the Thirtieth Dynasties which were located close to the village, south of the great Middle Kingdom necropolis. He came across a hidden chamber hosting a mummy laid within a wooden coffin, with a wooden figure of Ptah-Soker-Osiris by its side. The corpse had, upon its bandages, a network of short cylindrical beads. Smaller coloured beads were designed in the form of a winged scarab, the four genii and "other mythological devices" – maybe Nut and Isis and Nephthys – which seemed to be sewn into the netted cover (Fig. 8).<sup>65</sup>

<sup>60</sup> Petrie and Sayce 1974: 25.

<sup>61</sup> Silvano 1980.

<sup>62</sup> Naville 1895: 35.

<sup>63</sup> Naville 1895: 35.

<sup>64</sup> Garstang 1907: 200.

<sup>65</sup> Garstang 1907: 203.

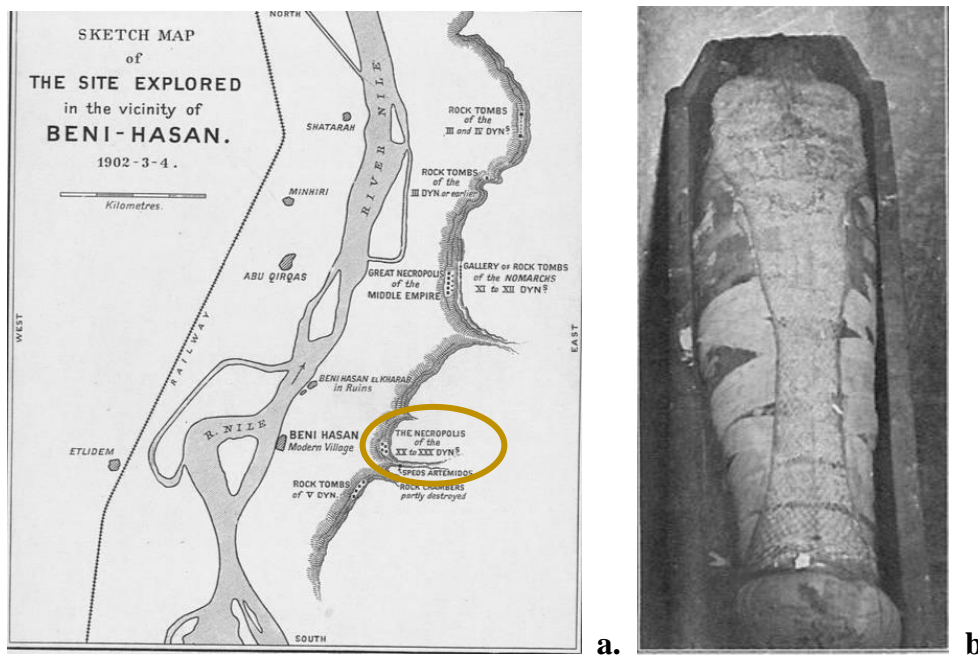


Figure 8 - (a) Map of Beni Hasan. The necropolis of the Twentieth to Thirtieth dynasties is pointed out (b) Mummy with a bead-net cover featured with beaded amuletic figures. Vicinity of Beni Hasan, the great Middle Kingdom necropolis. Twentieth – Twenty-Fifth Dynasty.<sup>66</sup> (Map and Photograph © Garstang Museum)

Accordingly, this net mummy cover has been included in Silvano's type B.<sup>67</sup> Despite the fact that Garstang dated the latter netting to the Third Intermediate period, no clear dating criteria can be determined from the publication.

#### Late Period 1a, 1b

From 1995 to 2005, excavations including the clearance of the funerary complex of the shaft tomb of Iufaa at Abusir resulted in the recovery of five bead-net covers. Fairly elaborate and finely crafted, these were placed upon the wrappings of five different mummified corpses: that of Iufaa, Imakhetkheretresnet, of an elderly man whose name is unknown, of Nekau and Gemenefhorbak.<sup>68</sup> The nets of the first two mummies were the only ones whose original appearance could be seen in situ. Because of the high level of humidity, the thread binding the beads together had disappeared. This was possibly the reason why the beads forming the bead-net covers of the latter three examples were instead found unevenly scattered on and at the sides of their bodies. The nets of Iufaa and Imakhetkheretresnet were both made up of cylindrical and ring-shaped pale blue and green beads of faience, constituting a cross-hatching pattern. Both the nets seemed to have once covered the deceased in their entirety. Both were featured with an elaborate wesekh-collar: Iufaa's was made from small coloured disc beads consisting of "seven interspersed rows of stylized leaves, lotus buds, rosettes and drop-shaped beads";<sup>69</sup> Imakhetkheretresnet's was a less complex collar, but the design included a face formed by small green, red and yellow disc beads which had still survived in place.<sup>70</sup> On both of these nets, amuletic figures, again in coloured small disc beads, were also present. The goddess Nut with outstretched winged arms and carrying a sun disc adorned both Iufaa's and Imakhetkheretresnet's nets, together with the four sons of Horus, though arranged differently upon each net. Imakhetkheretresnet's also had a winged scarab as a further addition (Fig. 9a, b).<sup>71</sup> Considering these details, both bead-nets would fall within Silvano's type C.

<sup>66</sup> Garstang 1907: 203, Fig. 217.

<sup>67</sup> Silvano 1980.

<sup>68</sup> Bareš and Smoláriková 2008.

<sup>69</sup> Bareš and Smoláriková 2008: 59.

<sup>70</sup> Bareš and Smoláriková 2008: 103.

<sup>71</sup> Bareš and Smoláriková 2008: 59, 103.

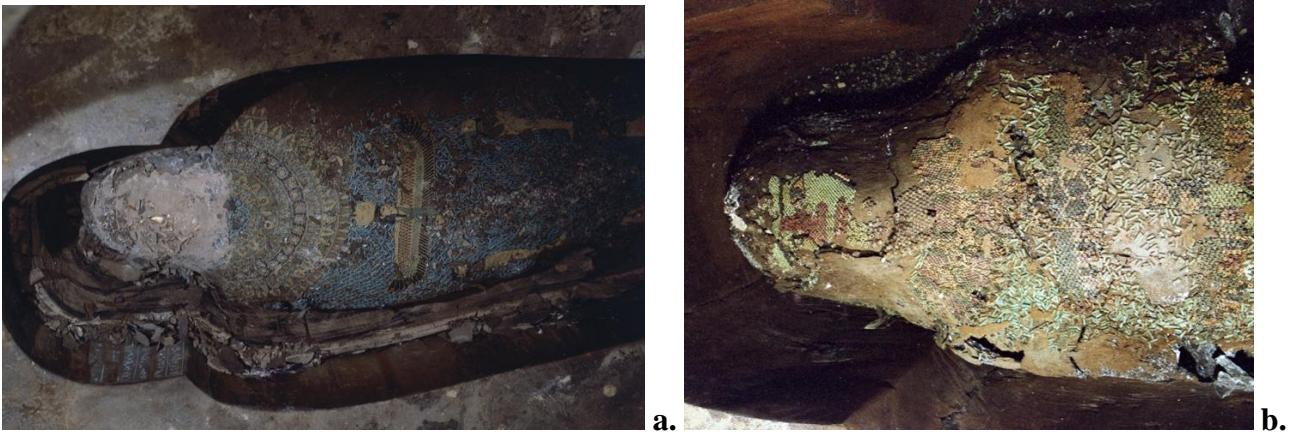


Figure 9: a,b Mummies of Iufaa and Imakhetkheretresnet, respectively showing the bead-nets as found in situ. Abusir. Twenty-Sixth Dynasty (ca. 530-525 BC). Dimensions: Cylindrical beads of 0.8-0.7 cm; ring-shaped beads of 0.25 cm. Left in situ ? (Photographs © Charles University, Faculty of Arts, 2021).<sup>72</sup>

### Late Period 2

In the campaigns of 1899 and 1900 at Saqqara conducted by Barsanti and Maspero on behalf of the Service des Antiquités de l’Égypte, a group of Saite tombs of Tjannehebu (*T3j-n-n3-hb.w*), Peteinese (*P3-dj-N.t*) and Psammetik,<sup>73</sup> were uncovered south of the Pyramid of Unas.<sup>74</sup> The mummy of Tjannehebu, head of the royal fleet, was covered from shoulders to hips by a very peculiar bead-net cover.<sup>75</sup> It was made of gold and feldspar cylindrical and rounded beads, and secured to the net with two falcon heads. There was a wesekh-collar of beads in gold, green feldspar and lapis lazuli, interspersed with amulets, with the whole net cover assembled with golden threads. Moreover, amuletic figures in gold foil were tied to the small rhombic meshes. From top to bottom, the goddesses Isis and Nephthys are positioned at the sides below the collar; the goddess Nut is in the centre, covering the torso, and sports outstretched wings carrying the sun disc, and the four genii are placed in pairs at the sides of a long band midway down the garment. This gold net was also inscribed with the deceased’s name and spells from the Book of the Dead.<sup>76</sup> This bead-net would exemplify Silvano’s type B due to the divine figures applied to the cover. Yet, its reconstruction drawing shows narrower meshes, which would place the net closer to type C. While most of these attached golden objects were recovered to be displayed in the Museum of Cairo, the collar as well as the net did not survive as the mummy was found fully covered in solidified bitumen.<sup>77</sup> They were later reconstructed only according to Barsanti<sup>78</sup> and Maspero’s<sup>79</sup> written descriptions. As a result, the artifact’s reconstruction might have been affected by the conservator’s subjective views.<sup>80</sup>

<sup>72</sup> Bareš and Smoláriková 2008: Pl. 3a, 3b.

<sup>73</sup> In Silvano (1980) transliterations of Tjannehebu and Peteinese were found. Regarding Psammetik, no Egyptian name could be retrieved. Also, these names slightly change according to different sources.

<sup>74</sup> Giangeri Silvis 1977: 9.

<sup>75</sup> Barsanti 1900; Maspero 1900; Gangeri Sivi 1977.

<sup>76</sup> Giangeri Silvis 1977: 79.

<sup>77</sup> Giangeri Silvis 1977: 80-81.

<sup>78</sup> Barsanti 1900: 267-69.

<sup>79</sup> Maspero 1900: 354.

<sup>80</sup> See Giangeri Silvis 1977: Pl. XXX for a drawing of the mummy of Tjannehebu showing the golden items as they were originally positioned. Detail of the goddess Nut and the four sons of Horus. Saqqara. Twenty-Sixth Dynasty (c. 570-526 BC).

## *Ptolemaic Period*

### *Ptolemaic Period 1*

Within Petrie's publication of his work at Denderah in 1898, he reported that Ptolemaic tombs were found "scattered without any system"<sup>81</sup> around the catacombs. Among these burials, examples were found of mummies covered in:

"Shrouds of beadwork in patterns, showing the scarab and wings, the four genii, &c. These were but coarsely done and of poor colours. Such examples as were in good condition Mr. Davies preserved by covering the outside with a coat of melted beeswax, as I had done long ago at Illahun".<sup>82</sup>

Although he seems to be describing bead-nets, no further details are given of the beadwork layout, the beads' material, and shape, or whether they were sewn into the textile. Also, Petrie does not elucidate the criteria he adopted for dating these finds to the Ptolemaic period. Even if the "shrouds of beadwork" are said to have been preserved by means of wax, their journey following their retrieval as well as their contemporary location is unknown.

### *Ptolemaic Period 2*

An example of a finely crafted face composed of small polychrome disc beads has come down to us from the 1934-1935 excavations at el-Hibeh undertaken by the Società Fiorentina (Fig. 10).<sup>83</sup> The find was retrieved from the inhabited area within the small urban centre, beneath which numerous tombs were excavated. These were suggested to be broadly dated to the Saite-Ptolemaic period.<sup>84</sup> Botti describes the finding of numerous mummies with bead-net covers featuring masks, wesekh-collars, winged scarabs and the goddess Nut on each mummy's chest along with coloured beaded bands with hieroglyphic inscriptions.<sup>85</sup> However, they did not survive lifting except for a few elements including the beaded face shown below, probably once part of a bead-net mummy cover. Yet, no details concerning its original archaeological context were documented.



Figure 10: Face made of small, coloured disc beads. El-Hibeh. Saite-Ptolemaic Period. 50713-ME10713 (Photograph © Museo Archeologico Nazionale di Firenze – Sezione "Museo Egizio").<sup>86</sup>

### *Ptolemaic Period 3*

Another particularly interesting example to note is the beaded netting found during the 1930s Egypt Exploration Society's excavations at the necropolis of the mummified Buchis bulls, at Armant, close

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<sup>81</sup> Petrie 1900: 31.

<sup>82</sup> Petrie 1900: 32.

<sup>83</sup> Botti 1958: Tav A I.

<sup>84</sup> Botti 1958: 186.

<sup>85</sup> Botti 1958: 185.

<sup>86</sup> Botti 1958: Tav A I.



to Thebes. At the time of discovery in Bucheum L, the beads including cylinders, oblates and oblate disks were much decayed due to the rise and fall of the water level in the area. Therefore, neither the original netted pattern nor the original colours of the beads, which were thought to have once been black, red, green, and blue, were fully preserved. The net was later reconstructed based especially on the stelae showing bulls covered in beaded netting from the same necropolis site. According to Mond and Mayers' publication, it was housed at the Wellcome Historical Medical Museum but might have been moved later as the contemporary location is currently unknown (Fig. 11a, b).<sup>87</sup>

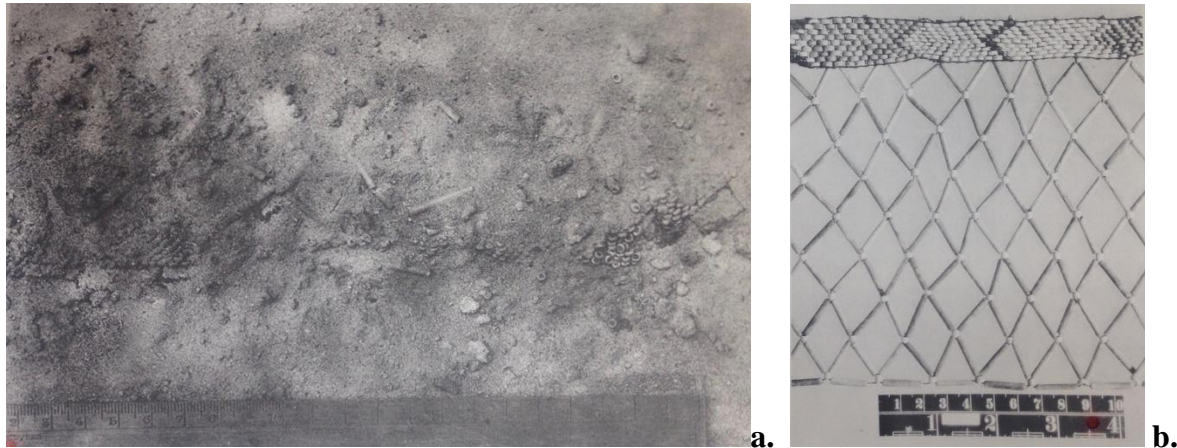


Figure 11: a. Photograph of the bull's burial from Bucheum L showing the scattered beads. b. Reconstruction of the net. No original beads were used because they were too fragile. Bucheum, Armant, Thebes. Ptolemaic Period. Unknown present location (Courtesy of the Egypt Exploration Society).<sup>88</sup>

### ***Bead-net dresses and net motifs in art***

Pictorial representations of dresses with lozenge patterns representing beadwork can be recognized in several surviving statues and reliefs from the Old Kingdom onwards.<sup>89</sup>

From the Early Dynastic Period, a small ivory statuette of a king from Abydos is shown wearing the cloak of the Sed-festival apparently decorated in a net-like design (Fig. 12).<sup>90</sup>



Figure 12: Ivory king statuette shown wearing the cloak in the net-like design of the Sed-festival. Abydos. EA37996 (Photograph © Trustees of the British Museum).

<sup>87</sup> Mond and Mayers 1934: 128-129.

<sup>88</sup> Mond and Mayers 1934: Pl. XCIX, XCV 10.

<sup>89</sup> Riefstahl 1944: 11; Vogelsang-Eastwood 1993: 127.

<sup>90</sup> Spencer 1980: 67.

However, no such pattern has been identified in any surviving depiction found on statues, sculptures, or reliefs from the same period.<sup>91</sup> Dating back to the Old Kingdom, the statue of 'Et'e, wife of Sekhemka, the superintendent of agriculture, constitutes one of the earliest examples of a clear cut bead-net dress representation. It is said to have once featured coloured beads forming the net, and caps covering the breasts.<sup>92</sup> Today the statue is preserved at the Louvre Museum in Paris (A102).

Moreover, in the mastaba tomb of Princess Hemet-Ra (Hm.t-R') at Giza, a relief depicting the princess wearing a dress in beaded net work was recognized.<sup>93</sup>

From the Middle Kingdom tomb of the royal chief steward Meketra at Deir el-Bahari, a wooden statuette of an offering bearer clearly wearing a lozenge-patterned dress in polychrome beadwork can be cited as one of the several instances of bead-net dresses portrayed in ancient Egyptian figurative art.<sup>94</sup> Moreover, from the same period and within the Asasif necropolis, the stela of Nit-Ptah was found. Here, four members of a family are depicted, and the wife wears a bead-net dress very similar to the one of the offering bearer, which was also made with coloured beads.<sup>95</sup>

Regarding the New Kingdom, a few objects have been identified as having a lozenge geometric motif depicted on them. Also, among Tutankhamun's burial equipment, three daggers were found which featured a similar pattern on the hilt, and two pectorals with the goddesses Isis and Nephthys, and Nut, wearing a beaded dress.<sup>96</sup> In addition, a few depictions of queens and goddesses wearing dresses in beaded netting were found in the paintings and on the reliefs of tomb walls (Fig. 13).<sup>97</sup>



Figure 13: Isis represented wearing a netted dress. Detail from the tomb of Nefertari, Valley of the Queens, Thebes. Metropolitan Museum of Art. 30.4.142. (Image of Public Domain).

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<sup>91</sup> Strudwick 2006: 36.

<sup>92</sup> Erman 1894: 212-213; Riefstahl 1944: 11-12.

<sup>93</sup> Hassan 1932: 56-57.

<sup>94</sup> De Luca et al. 2001: 453; Riefstahl 1944: 15. The aforementioned offering bearer statuette is one of a pair from the same burial. It is today preserved at the Egyptian Museum in Cairo. JE 46725. The other offering bearer wears a sheath dress with a feather pattern and is today preserved at the Metropolitan Museum of Art. 20.3.7.

<sup>95</sup> De Luca et al. 2001: 107. The stela of Nit-Ptah from Asasif, Thebes is today preserved at the Egyptian Museum in Cairo. JE 45625.

<sup>96</sup> De Luca et al. 2001: 314, 329, 331. Dagger 1 is today preserved at the Egyptian Museum in Cairo. JE 61585A. The other daggers and the pectoral are preserved at the Egyptian Museum in Cairo. Yet, their accession numbers are not accessible online to date.

<sup>97</sup> See Davies 1927: Pl. V for a reproduction drawing of Queen Ahmose with a bead-net dress. Detail from the tomb of Userhet, Thebes.

By the New Kingdom, it seems that bead-net dresses started being an exclusive item of queens and goddesses.<sup>98</sup>

In the Third Intermediate Period, due to the changing economic, social, and political landscape, the practice of painting and carving reliefs on tomb walls started to decline. Even elite members of society began to be buried together in undecorated funerary complexes.<sup>99</sup> Nonetheless, to compensate for this economy, their coffins became means of artistic display par excellence. At the same time, bead-net covers appear in the archaeological record of funerary contexts.<sup>100</sup> Representations of beaded garments, and netted patterns in general can be found on the outside and inside of the body containers, thus showing the coffins' multidimensional character. Several Twenty-First Dynasty Theban anthropoid coffins of the 'yellow type' show evidence of this patterned clothing being worn especially by goddesses depicted on the container.<sup>101</sup>

Also, examples of wooden stelae that have survived in the sparser burial equipment of this period have gods and goddesses represented wearing beaded clothing.<sup>102</sup> This 'custom' appears to have continued into the Late Period,<sup>103</sup> though sporadically, and to have lasted well into the Graeco-Roman era. During this time, representations of goddesses in bead-net dresses along with those of Osiris and even of the dead themselves enveloped in netted wrappings seem to occur more often on coffins. Also, several coffins featured a background consisting of a netted pattern on which further decoration was carried out (Fig. 14a, b). The same pattern can be recognized on funerary shrouds as well (Fig. 14c).<sup>104</sup> Furthermore, examples of rhombic-patterned robes can be identified in these funerary environments.<sup>105</sup>



Figure 14: **a.** Mummy coffin decorated with a background of netting pattern from Akhmim. EA29584 (Photograph © Trustees of the British Museum). **b.** Mummy coffin decorated with a background of netting pattern from Akhmim. EA29588 (Photograph © Trustees of the British Museum). **c.** Mummy shroud with the deceased depicted as Osiris wearing netted clothing. AN1913.924 (Photograph © Ashmolean Museum, Oxford).

<sup>98</sup> Vogelsang-Eastwood 1993: 129.

<sup>99</sup> Cooney 2007: 281.

<sup>100</sup> Cooney 2007: 271; Niwinski 1988: 15.

<sup>101</sup> See Niwinski 1988: Pl. XIX A, XV B, XIV B for a few examples of the rhombic pattern of coffin decoration.

<sup>102</sup> See El-Leithy 2018: 68.

<sup>103</sup> See Stovesand 2018: 400 for the base of a Late Period coffin depicting a goddess with a dress in a netted pattern.

<sup>104</sup> See Riggs 2005: 83, 108, 197 for examples from the Roman Period, where a netted pattern can be recognized on coffin, mummy mask and shroud.

<sup>105</sup> See Venit 1997: 711 for a photograph of the central niche of a 2<sup>nd</sup> century tomb in Alexandria showing the dead enveloped in rhombic style bandaging. See also Von Bissing 1901: Pl X for a drawing by Gilliéron of the right wall of the left niche of the main tomb's burial chamber in Kom el-Shoqafa, Alexandria, showing the deceased depicted as Osiris and enveloped in rhombic style bandaging.

Although further research should be conducted on the presence of bead-nets in animal burial sites such as the Serapeum or the Sacred Animal Necropolis, it might be suggested that the use of actual bead-nets expanded to animal funerary contexts and so did the representations of them. What seems to be a cloth in beaded netting, indeed, was represented on sacred bulls' figures carved in stone stelae dating back to the Roman period, from the aforementioned Bucheum.<sup>106</sup>

## Discussion and Results

### *Old Kingdom*

The bead-net dress examples presented above appear similar in type overall, though differences can be acknowledged. They were all made of cylindrical and ring-shaped faience beads, which ranged in colour mainly from blue to green. Organized typically in a halter and a skirt, not all had collars or breast caps. The fringe at their bottom edge appears to be the feature which clearly differentiates the dresses from one another. While the Qau (OK 2) fringe was unique in its use of Mitra shells, those dresses from Giza had all conic pendants (OK 1, 3, 4). Yet, in contrast to OK 1 and OK 4, OK 3 had pendants made of bronze. Considering only the reassembled dresses, it is worth noting the different widths of the nets' meshes, which are visibly narrower in those of OK 1 and the Qau example (OK 2), compared to those of dress OK 4. Moreover, the Qau dress is half the size of the OK 1 garment. This led scholars to suppose that the Qau dress once belonged to a young girl.<sup>107</sup>

Due to having been retrieved solely from burial contexts at a time when the funerary equipment was not as rich as in later periods,<sup>108</sup> the question of the function of the bead-net dresses is currently still open to debate. It remains unclear whether they constituted artifacts manufactured for funerary purposes only, or if they were also used in daily life by Egyptian women as well.

### *Middle Kingdom and Second Intermediate Period*

Following the Old Kingdom - though their presence in tombs was already occasional in this period-, bead-net dresses, like those described above, were no longer found among the material culture encountered in archaeological contexts. Faience, the raw material used for their beads, kept on being produced especially for the crafting of funerary jewellery.<sup>109</sup>

The gap in archaeological evidence of beaded-netting until the New Kingdom examples of Tutankhamun's cloaks can be attributed firstly to the social and political fragmentation that characterized the First Intermediate Period which brought about shifts and regional differentiation in burial customs thus leading to the abandonment of the dress as a funerary artifact in favour of other funerary traditions.<sup>110</sup> Secondly, it has been suggested that such a garment was missing from Middle Kingdom burials because it had begun to be worn by women in their everyday life as an embellishment to their dresses.<sup>111</sup> Yet, why haven't complete garments, and therefore also beaded dresses, been found in settlement sites?

It can also be argued that the advent of decoration of tombs' chambers and coffins by means of friezes, pictorial depictions and religious texts, and the increased number of grave goods, were among the reasons for the bead-net dresses disappearance from mummies' ornaments.<sup>112</sup> Indeed, the beaded netting dress survived in representational evidence, namely in two of the most common elements of Middle Kingdom funerary equipment: wooden statuettes of offering bearers and stelae.

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<sup>106</sup> Mond and Mayers 1934: Pl. XLV, XLVI.

<sup>107</sup> Hall 1981: 39; Janssen 1996: 44; Seth-Smith and Lister 1995: 166-167.

<sup>108</sup> Gajetzki 2003: 17-18.

<sup>109</sup> Patch 1998: 32.

<sup>110</sup> Grajetzki 2003: 36-37.

<sup>111</sup> Vogelsang-Eastwood 1993: 127.

<sup>112</sup> Grajetzki 2003: 41.

A first examination of a passage in Tiraditti's publication<sup>113</sup> appears to refer to a body cover comparable to the bead-nets of the later periods. At the royal necropolis of Dra' Abu el-Naga North in Thebes, and within the tomb of Hornakht, of the Seventeenth Dynasty, a box coffin with the skeleton of a woman called Soheknakht was found wrapped in a red-dyed shroud which was sewn with blue beads.<sup>114</sup> Being too fragile, the beaded work survived only in the drawings of Vassalli.<sup>115</sup> By considering this sole evidence, the beads embroidered with the garment do not seem to be organized in a net-like pattern. This could suggest that the funerary cloth was a completely different artifact or formed another category of beadwork, perhaps a beaded-shroud, which potentially provides the missing link between the Old Kingdom bead-net dresses, Tutankhamun's cloaks and the Late Period's mummy covers. This possible connection would be limited to the use of blue beads which, though described as being of glass,<sup>116</sup> might have perhaps been actually faience of the finest quality. The glazes produced by efflorescence and cementation techniques have been first securely attested in this period.<sup>117</sup> Moreover, the possibility of the bead-net dresses and bead-nets being sewn into textiles could constitute a further link between them and the Second Intermediate Period shroud. However, the considerable time gap between the few examples identified may constitute a challenge for scholars attempting to interpret bead-nets.

### *New Kingdom Period*

Although Tutankhamun's robes are richly decorated with faience beaded-netting and therefore comparable to the Old Kingdom bead-net dresses at first glance, the garments are also different in several aspects. The modern reconstructions resemble the original appearance of the netted motifs as drawn and described by Howard Carter in his notes (Fig. 15).<sup>118</sup>

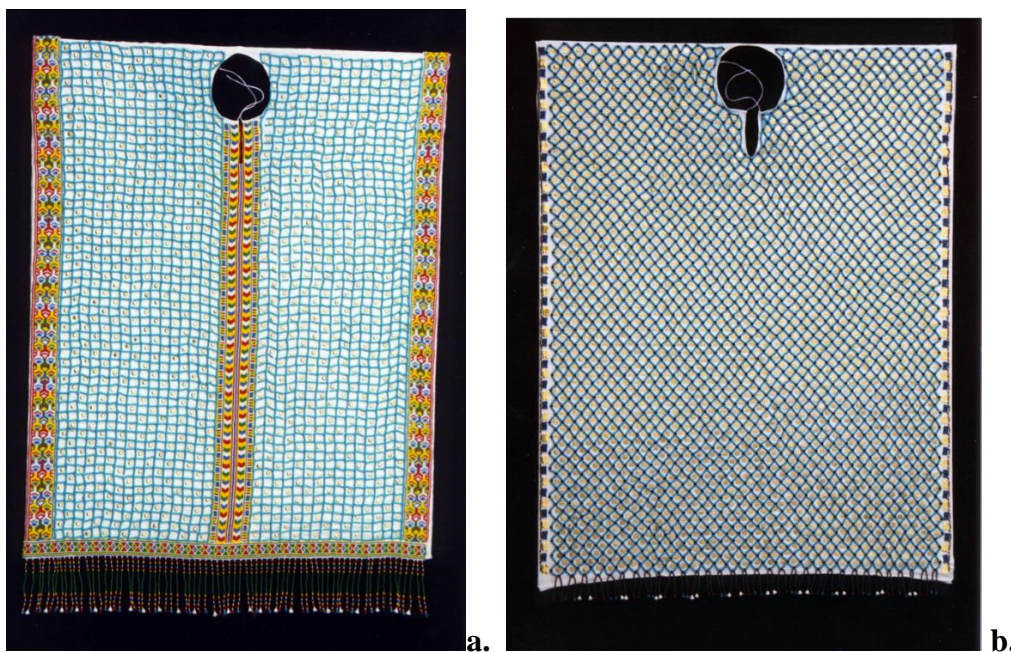


Figure 15 - **a.** Reconstruction of robe 021d showing the beads perpendicularly sewn to the bands (Courtesy of J. Bos).  
**b.** Reconstruction of robe 044w showing the beads of the net diagonally sewn to the bands (Courtesy of J. Bos).<sup>119</sup>

<sup>113</sup> Tiraditti 2010.

<sup>114</sup> Tiraditti 2010: 336, 339.

<sup>115</sup> Vassalli 1867: 131, Pl. 119; Winlock 1924: 258.

<sup>116</sup> Vassalli 1867: 132.

<sup>117</sup> Nicholson and Peltenburg 2000: 181.

<sup>118</sup> See Carter 1922: cards 021d-11, 044w-1 and 044w-2.

<sup>119</sup> Bos 2014: 4.

Because no other similar examples have been identified in ancient Egypt's bead-net production, Tutankhamun's cloaks are unique.<sup>120</sup> While the dimensions of robe 044w were not unusual for a man's garment, robe 021d, smaller in size,<sup>121</sup> seems to have been made for a child. This was perhaps worn by the King himself as a child as wear marks were noticed by Carter.<sup>122</sup> Through the analysis of robe 021d, it was determined that the beads forming the net portion of the garment were poorly sewn into the textile compared to those making up the lateral bands. This led scholars to assume that the net was a later addition, whose production could have been accelerated because of the untimely death of the king.<sup>123</sup> So, the bead-net may have specifically been produced for the king's grave, giving it both a precise funerary function and a symbolic meaning. Robe 044w could have also been added to the equipment for the King's use in the afterlife with its bead-net endowed with the same meaning. In the end, the cloaks may be identified as an evolution of the previous bead-net dress, and the beaded-shroud, and may be a predecessor to the following bead-net mummy cover, all possibly reinventions of the same Old Kingdom diaphanous dress.

### *Third Intermediate and Late Period*

The bead-nets which cover the Third Intermediate Period elite mummies have been encountered by experts more often among grave goods. The revival of an old custom, revisited in all or some of its components, may have taken some time to spread among the Egyptian population. Indeed, the employment of bead-net covers for the mummified body in funerary contexts reached its acme in the Late Period.<sup>124</sup>

From the Third Intermediate Period, the three examples described above seem to all feature amuletic figures made with small coloured disc beads closely tied together. The winged scarab and the four genii are common representations in all. Though the length of the nets is not specified in those examples from Lahun (TIP 1), the bead-net from Deir el-Bahari (TIP 2) stops at the hips of the mummy, while the one from Beni Hasan (TIP 3) continues to the ankles. Yet, this difference may also be a product of modern reconstruction. Again, as the description of Lahun's nets is limited, the nets meshes of examples 2 and 3 of the Third Intermediate Period appear to be of a medium width compared to simpler nets categorised by Silvano as Type A, and to the more complex ones included in Type B.<sup>125</sup> As a result, the size of the cylindrical beads seems to have been adjusted to fit the paradigm that the smaller the meshes, the smaller the beads.

At first, the bead-net may have been adopted again as the reintroduction of an old custom. It might have served the purpose of recalling 'a better past' and of reaffirming a unifying cultural and religious identity which was being undermined by political distress, and by the foreign influence of Libyans and Nubians that Egypt was experiencing.<sup>126</sup> Burials where bead-nets were found may have belonged to members of the Egyptian elite. Therefore, they might have revived and reinterpreted the old custom in an attempt to set themselves apart from the poor and foreigners, and so justify their privileges within a changing environment.<sup>127</sup> On the other hand, it has also been argued that, in a form of 'archaism', new rulers might have revived past values as a "reassuring signal that everything was back to 'normal' and that the threat of foreign invaders had been dissipated".<sup>128</sup> This could be seen as an effort to create cohesion between the newcomers and the original inhabitants of the land. However, no word for archaism or a synonym was used by ancient Egyptians,<sup>129</sup> so no substantial evidence can be evaluated to prove or disprove one interpretation or the other.

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<sup>120</sup> Bos 2017: 121.

<sup>121</sup> See Carter 1922: card 021d-13.

<sup>122</sup> Bos 2017: 120.

<sup>123</sup> Bos 2017: 122.

<sup>124</sup> Xia 2014: 127.

<sup>125</sup> Silvano 1980.

<sup>126</sup> Grajetzki 2003: 94; Taylor 2003: 324.

<sup>127</sup> Assmann 2003: 345; Neureiter 1994.

<sup>128</sup> Wilson 2010: 255.

<sup>129</sup> Neureiter 1994: 220.

Secondly, the use of bead-nets could be a response to the disappearance of burial customs typical of the Late Ramesside period and Twenty-First Dynasty, such as the trend to focus on an elaborate decoration of coffins, shabtis, and Book of the Dead spells. From the Twenty-Second Dynasty, body containers were rather simple and canopic jars were no longer in common use.<sup>130</sup> As a result, ancient Egyptians still had to convey their cosmological beliefs and symbols into material form. For instance, the Four Sons of Horus, protectors of internal organs, shifted from the form of canopic jars to that of amuletic figures attached to these funerary bead-nets; the pictorial representations on the coffins such as that of the winged scarab or the goddess Nut, common since the New Kingdom,<sup>131</sup> came to be produced in the form of amulets or beaded figures on these mummy covers. As in the Ramesside period, many were still the undecorated caches and communal elite burials.<sup>132</sup> This can be seen as an attempt to move towards a ‘democratization of the afterlife’.<sup>133</sup> Yet, the use of additional ornaments such as bead-nets by several well-to-do individuals for their burials might be seen as a willingness to distinguish themselves from the rest of the population, within the framework of what Cooney calls ‘functional materialism’.<sup>134</sup> Precious materials were perhaps avoided to prevent ‘opportunistic plundering’ at the hands of contemporary robbers, who were looking for valuable objects to reuse.<sup>135</sup>

Foreign rule of the land continued into the Late Period, first by the Assyrians, then by the Persians.<sup>136</sup> Despite canopic jars, shabtis and the Book of the Dead being reintroduced at the dawn of the Twenty-Sixth Dynasty,<sup>137</sup> the bead-net used as a cover for the deceased’s body was concurrently commonly used during the Late Period. Rather, due to a renewed care for traditional arts, including the use of faience,<sup>138</sup> the bead-net became an integral part of the period’s funerary customs, following and developing on the mummy cover which first appeared a few centuries before. This might have occurred as an attempt to reaffirm once again, and keep alive, a unique cultural and religious identity during prolonged foreign domination or as a sign of continuity coopted by foreigners to justify their rule.<sup>139</sup> Overall, however, on the basis of the evidence from original archaeological contexts, it seems only possible to formulate hypotheses of interpretation on why the production of beadwork was resumed after a century long gap, with the beaded shroud first introduced, then beaded robes and finally bead-net mummy covers.

The main difference between those of the Late Period from the bead-nets encountered previously is that the later pieces are more complex and finely crafted, and, in some instances, embellished with precious materials.

The examples from the shaft tomb of Iufaa (LP 1a, 1b) are characterized by a large amount of small, coloured disc beads that form the shape of a face, an elaborate collar and amuletic figures including the goddess Nut with outstretched wings, a winged scarab and the four genii which are far richer in detail compared to those of earlier nets. To keep such decorative works in place, the nets’ meshes were much smaller in width than the previously considered examples of the Third Intermediate Period, and so were the cylindrical beads and ring beads which constituted the net. The bead-net cover of Tjannehebu (LP 2) appears to be one of a kind due to the semi-precious materials used. Indeed, in comparison to Iufaa’s and Imakhetkheretresnet’s, this bead-net was once made of beads of gold and feldspar and the figures it was decorated with were made of gold. In addition to the more commonly encountered Nut, scarab and four genii, this bead-net included a long

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<sup>130</sup> Grajetzki 2003: 101-102.

<sup>131</sup> Griffiths 1980: 48.

<sup>132</sup> Cooney 2007: 271-272.

<sup>133</sup> Baines and Lacovara 2002: 10; Richards 2005: 7-9.

<sup>134</sup> Cooney 2007.

<sup>135</sup> Näser 2013: 651.

<sup>136</sup> Grajetzki 2003: 109; Taylor 2003: 372.

<sup>137</sup> Grajetzki 2003: 112.

<sup>138</sup> Nicholson and Peltenburg 2000: 184.

<sup>139</sup> Assmann 2003; Wendrich 2010: 253.

golden band with inscriptions, as well as images of Isis and Nephthys and two falcon heads fashioned to keep the collar in place.<sup>140</sup>

### *Ptolemaic to Roman period*

The custom of equipping the deceased with a bead-net is said to have also continued within the first period of Greek domination in Egypt, at the time of the occupation after Alexander the Great that formally begins the Ptolemaic period.<sup>141</sup> However, the examples reported above (PP 1 and 2) whose dating criteria and contexts cannot be ascertained (an exception can possibly be made for the Bucheum's bead-net (PP 3)), may not be considered as substantial evidence for affirming the extension of the bead-nets' use into the Ptolemaic period. Moreover, there are difficulties in general which characterise the dating of artifacts and structures belonging to later periods of ancient Egyptian history.<sup>142</sup> When the Ptolemies were ruling in Egypt, Egyptians went on burying their dead according to their own habits, so it has often been regarded as "impossible to determine whether a burial belongs to the Thirtieth Dynasty or the Early Ptolemaic period".<sup>143</sup>

It seems, though, that faience was still extensively employed to produce beads during this period and then fell out of use following the Roman conquest (Fig. 16). Because of the challenges of providing accurate dating of the material culture from this later period, it is possible that a proper documentation of the remains of bead-nets, as of other artifacts, has not been feasible.

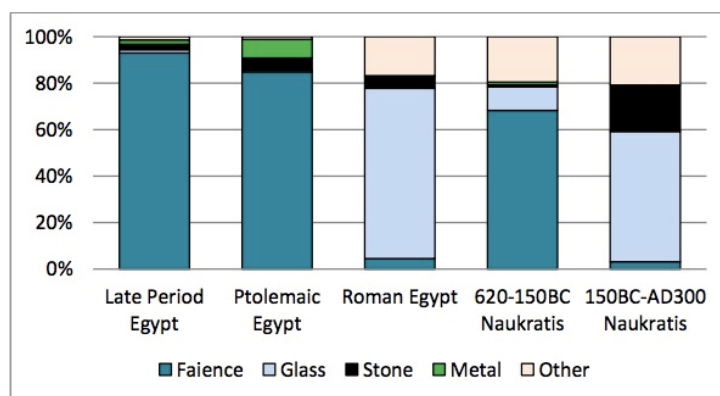


Figure 16 - Graph showing beads' materials by period as reported in Xia's (2014) study of the Petrie Museum collection compared with the data from Naukratis, a settlement and trading post from the Twenty-Sixth Dynasty onwards (Thomas and Acosta 2018).

With Egypt becoming part of the Roman Empire in the 1<sup>st</sup> century BC, a series of changes started to take place in cultural traditions overall and within the funerary sphere in particular. While early scholars would regard this as a process of 'acculturation' or Romanization of the Egyptian population, it seems nowadays more suitable to talk about mutual cultural exchanges between two different populations who were coming into close contact, both active agents in the shaping of their own identities.<sup>144</sup> Components of both the cultures were chosen, modified, and adapted to the necessities of a multicultural group. Mummification practices were still undertaken, though slight shifts can be acknowledged.<sup>145</sup> Portraits in Classical style replaced the previously employed mummy masks. Even though bead-net mummy covers seem to fall out of use, the netted pattern survived in art. Possibly because geometric motifs of the most diverse kinds were also a common feature in Roman mosaic

<sup>140</sup> Giangeri Silvis 1977: 79.

<sup>141</sup> Taylor 2001: 207.

<sup>142</sup> E.g., see Baines and Riggs 2001.

<sup>143</sup> Grajetzki 2003: 123.

<sup>144</sup> Woolf 1998.

<sup>145</sup> Riggs 2003: 1.



art,<sup>146</sup> the netted motif might have been familiar to Roman foreigners. Indeed, the diagonal winding of the mummy bandages - possibly resembling the netted pattern of the previous bead-net covers - became typical of the Roman period in Egypt. Also, interesting to note may be the presence within each rhombus of gilded foil and gilded buttons that visually recall the New Kingdom sequins of Tutankhamun's beaded robes. A possible form of 'archaism' that may be recognized. This would suggest the peculiar organisation of the mummy bandages as the latest development of the bead-net design among artifactual evidence, representing an intentional reworking of an old Egyptian custom down into the Roman era.

## Conclusions

From the Old Kingdom to the Ptolemaic Period, examples of bead-net dresses, beaded textiles, a shroud, and bead-net mummy covers from burial contexts of ancient Egypt were examined qualitatively. Overall, from the gathered data it seems that the bead-net dresses were in use between the Fourth and the Sixth Dynasties of the Old Kingdom, while bead-net covers were mostly spread among the elite of the Twenty-Fifth and Twenty-Sixth Dynasties, at the turn of the Third Intermediate and Late Periods. According to the width of the meshes and the amuletic figures which decorated the nets, the latter appear to be more frequently of type B and C of Silvano's classification.<sup>147</sup> Mostly through published literature, a common line could be drawn through the material culture considered which at first glance may have seemed dissimilar. Cylindrical and ring-shaped beads were featured in most of the examples described in this article, and blue-green faience beads seem to have been a characteristic of all, with the sole exception of the bead-net cover of Tjannehebu (LP 2). Moreover, excluding the Second Intermediate Period shroud, the beads forming the dresses and the mummy covers, and decorating Tutankhamun's robes, appear to have all been laid out in a net-like pattern. Roman Period intertwined mummy bandages seem to also recreate a netted motif. In addition to the commonalities of their outer appearance, the bead-net dresses, beaded robes and shroud, and mummy covers may also have had a common funerary function and symbolism. While the Papyrus Westcar may have contained a reference to the diaphanous womanly dress of the Old Kingdom, representational data from the archaeological record has shown how the dress, and the pattern, survived in art throughout pharaonic Egypt and into the Roman Period. The combination of both the physical and representational evidence presented has led to consider bead-nets – thought to be an item for women in early times - as a non-gendered object related to death. Yet, more mummies with beadworks of determined biological sex would be necessary for a more accurate statement. Concerning the daily life dimension of beads and beadwork, the question remains open as to whether the bead-net dress was worn by women in life or not. A possible reference from Westcar and pictorial depictions on statues and reliefs do not seem to constitute a strong enough corpus of evidence. No other similar artifacts seem to have been discovered in archaeological contexts outside of burials. As for the bead-net garments of Tutankhamun, they are suggested to have been worn in life, decorated with beads disposed in a net-like pattern and added to the tomb equipment for supposedly funerary purposes.

It is with the Third Intermediate and Late Period bead-net covers that a purely funerary function can perhaps be deduced more clearly. Positioned on top of the mummy's wrappings, these covers probably reinforced the coffins' function. They aimed at evoking Nut and the Sun god Re, or Hathor and the Sun god Re through the symbolism underlying their materials, colours, and amuletic figures placed on top. Thanks to the sympathetic, protective, and evocative role of the net, the supernatural power of regeneration of the creator gods were bestowed upon the deceased, who were thus able to succeed in their own rebirth.

In conclusion, it can be suggested that the Old Kingdom bead-net dress, Tutankhamun's garments, the beaded shroud, and the bead-net covers are all material outcomes of the same abstract

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<sup>146</sup> See Field 1988.

<sup>147</sup> Silvano 1980.

cosmological and religious belief. The changing form of the artifact over time may be seen in the context of an evolution of funerary belief. The change of form may be characterised by breaks, possibly caused by the shifts in burial customs and the occurrences of socio-political distress which may have re-defined the value of the artifact. Yet, because the net survived in representational evidence throughout pharaonic history, it can be suggested that it never lost its importance in the funerary sphere. Overall, it seems that the bead-nets embodied the physical means for ancient Egyptians to communicate with the non-material world of the gods, the aim being bridging the gap between the human and the supernatural sphere. As a result, as shown in this article, bead-nets embodied a “tool for identification of [the] thinking and cognition” behind their making and use in the world of ancient Egypt, as well as behind their re-use in the 20<sup>th</sup> century world of Western colonialism.

## Figures

**Figure 1:** Typological classification of bead-net covers. Silvano 1980. © Pisa University Press.

**Figure 2a:** Skeleton of tomb G 7442 [G7440 Z] showing the beads in position from the opening of the coffin's lid. The groups of beads in the gridle layout and net pattern are pointed out. Giza, Eastern Cemetery. Fourth Dynasty, c. 2551-2528 BC. Photograph © Giza Project at Harvard University - <http://giza.fas.harvard.edu/sites/2165/full/>

**Figure 2b:** Reassembled. Photograph © Museum of Fine Arts, Boston. 27.1548.1.

**Figure 3:** Reconstructed bead-net dress from tomb 978, Southern cemetery, Qau. *Fifth* Dynasty, c. 2456-2323 BC. Photograph © Petrie Museum, London, UC 17743.

**Figure 4:** Faience and copper beads from shaft 294, Southern Cemetery, Giza. Fourth – Fifth Dynasty ? Hassan 1936, PL. LIII 2. Photograph © Giza Project at Harvard University.

**Figure 5:** Reconstructed bead-net dress from pit G 5520 D [G 2342], Western Cemetery, Giza. Sixth Dynasty, ca. 2323-2150 BC. Photograph © Museum of Fine Arts, Boston. 33.1020.1.

**Figure 6:** Box 021, as labelled by H. Carter in his published notes. The beaded cloak (021d) is evident among the other contents. Faience and glass beads sewn into linen. Tutankhamun's tomb, antechamber, Valley of the Kings, Western Thebes. Eighteenth Dynasty. Photograph © Griffith Institute, University of Oxford.

**Figure 7:** Mummy of Zet-Tehuti-Auf-Ankh (or Djed-djehuty-iuef-ankh) with a bead-net cover. Close ups on the winged scarab and the four genii in small, coloured disc beads. Temple of Hatshepsut, Deir el-Bahari, Western Thebes. Twenty-Fifth Dynasty, Ca. 770-712 BC. Photographs © Ashmolean Museum, University of Oxford. AN1895.153, 155-156.

**Figure 8a:** Map of Beni Hasan. The necropolis of the Twentieth to Thirtieth dynasties is pointed out. © Garstang Museum.

**Figure 8b:** Mummy with a bead-net cover featured with beaded amuletic figures. Vicinity of Beni Hasan great Middle Kingdom necropolis. Twentieth – Twenty-Fifth Dynasty. Photograph © Garstang Museum.

**Figure 9a,b:** Mummies of Iufaa and Imakhetkheretresnet, respectively showing the bead-nets as found in situ. Abusir. *Twenty-Sixth Dynasty* (ca. 530-525 BC). Photographs © Charles University, Faculty of Arts, 2021.

**Figure 10:** Face made of small, coloured disc beads. El-Hibeh. Saite-Ptolemaic Period. 50713-ME10713. Photograph © Museo Archeologico Nazionale di Firenze – Sezione “Museo Egizio”.

**Figure 11a:** The bull's burial from Bucheum L showing the scattered beads. Armant, Thebes. Ptolemaic Period. Courtesy of the Egypt Exploration Society.

**Figure 11b:** Reconstruction of the net. No original beads were used because too fragile. Bucheum, Armant, Thebes. Ptolemaic Period. Courtesy of the Egypt Exploration Society.

**Figure 12:** Ivory king statuette shown wearing the cloak in net-like design of the Sed-festival. Abydos. EA37996. Photograph © Trustees of the British Museum.

**Figure 13:** Isis represented wearing a netted dress. Detail from the tomb of Nefertari, Valley of the Queens, Thebes. Metropolitan Museum of Art. 30.4.142. Image of Public Domain.

**Figure 14a:** Mummy coffin decorated with a background of netting pattern from Akhmim. EA29584. Photograph © Trustees of the British Museum.

**Figure 14b:** Mummy coffin decorated with a background of netting pattern from Akhmim. EA29588. Photograph © Trustees of the British Museum.

**Figure 14c:** Mummy shroud with the deceased depicted as Osiris wearing a netted clothing. AN1913.924. Photograph © Ashmolean Museum, Oxford.

**Figure 15a:** Reconstruction of robe 021d showing the beads perpendicularly sewn to the bands. Courtesy of J. Bos.

**Figure 15b:** Reconstruction of robe 044w showing the beads of the net diagonally sewn to the bands. Courtesy of J. Bos.

**Figure 16:** Graph showing beads' materials by period as reported in Xia's (2014) study of Petrie Museum collection compared with the data from Naukratis, settlement and trading post from the Twenty-Sixth Dynasty onwards (Thomas and Acosta 2018).

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